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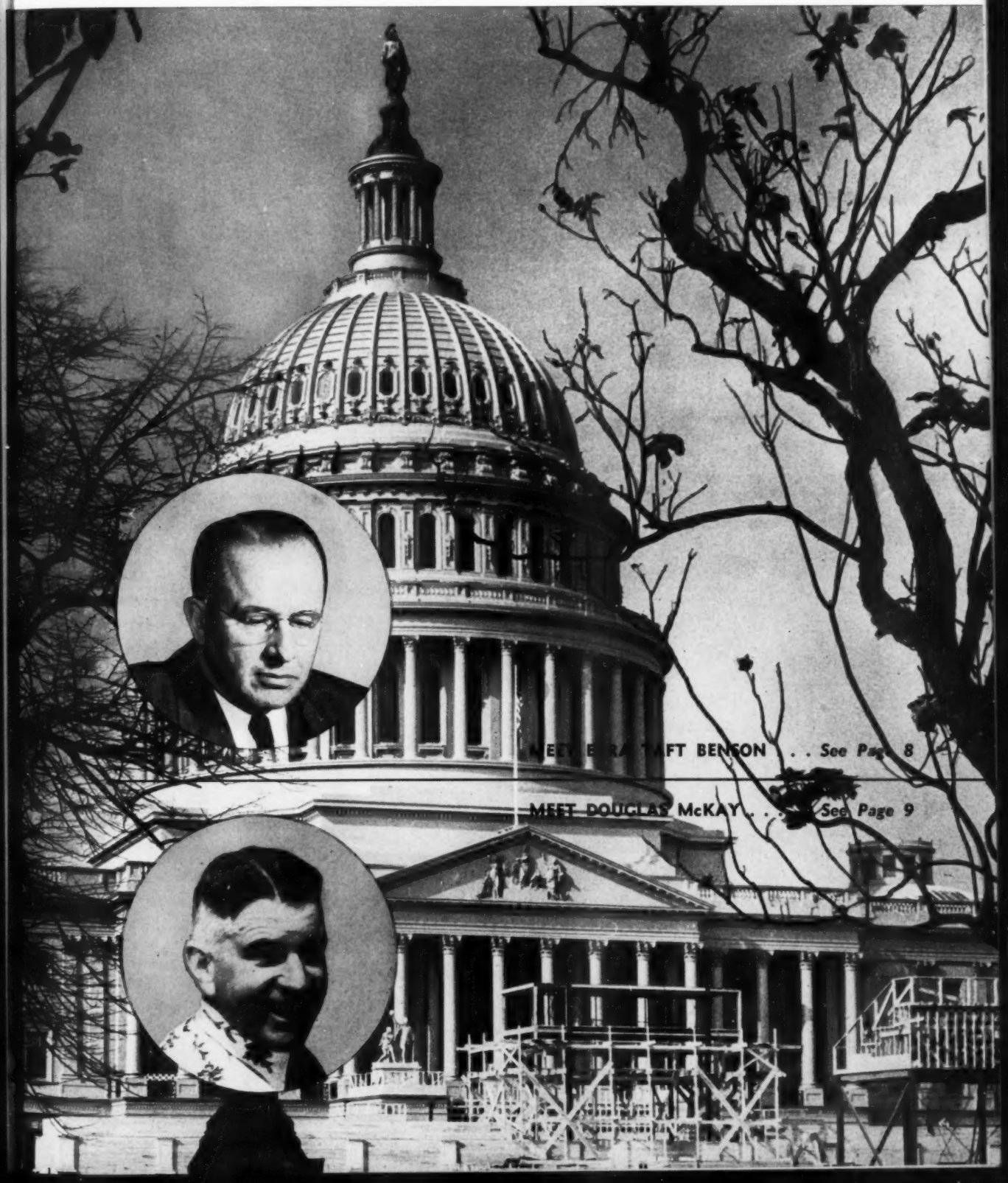
JANUARY 1953 50 CENTS



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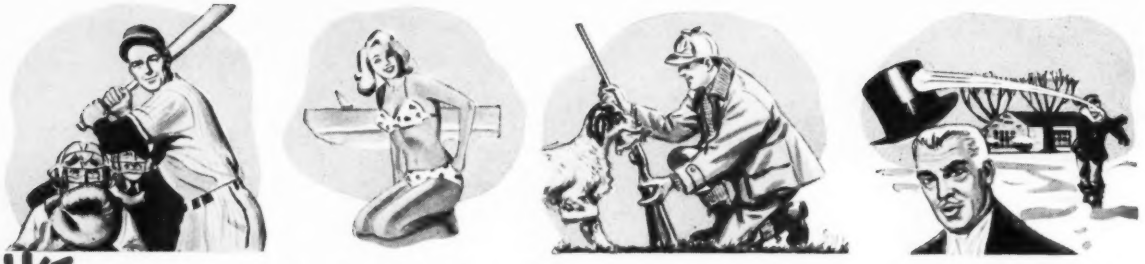
MEET DOUGLAS McKAY . . . See Page 9



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JANUARY, 1953

American FORESTS

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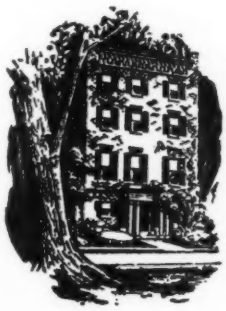

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The American Forestry Association, publishers of *American Forests*, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

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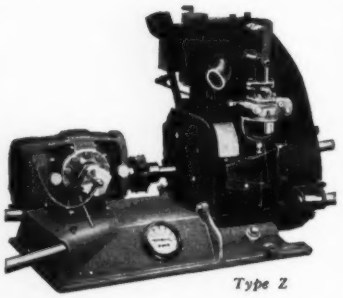

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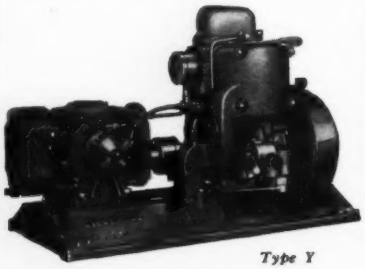
WHEN THE FIRST Pacific Pumper was introduced, it was a startling innovation. To produce an efficient pump light enough to carry by hand into rugged terrain but powerful enough to deliver an effective flow of water to combat forest blazes was news of national importance. Today, after nearly 30 years, many of the earliest Pacific Pumpers are still in use and are still the favorite of experienced fire fighters . . . mute testimony to the stamina and dependability built into all Pacific Pumpers . . . and to Pacific Pumper's policy of supplying parts for even the earliest models.



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AMONG OUR AUTHORS

Mr. Jones

Nard Jones (*The People in Pulp and Paper*) is a contributor to leading national magazines and the author of 11 books. His best-known novel, *Swift Flows the River,* is a story of steamboating on the Columbia River in the Fifties and Sixties. He is a former associate editor of PULP AND PAPER MAGAZINE and presently is at work on a pocket novel which has Olympic Peninsula logging for background.

Ralph O. Wiese, Forest Service "snow ranger," is responsible for the striking photographs and interesting background information that make up *How To Tame an Avalanche,* a picture-story that describes how Mr. Wiese sets out to break the back of an avalanche, thereby affording greater safety to skiers on western slopes.

John B. Woods (*Meet Douglas McKay*) is a longtime contributor to AMERICAN FORESTS. He is also a neighbor of the newly-named Secretary of the Interior out in Salem, Oregon.

Richard Squires, who interviewed Ezra Taft Benson, the new Secretary of Agriculture, for this issue of AMERICAN FORESTS, has been a political writer for THE SALT LAKE TRIBUNE in Utah for the last six years. This month he will arrive in Washington, D. C., as administrative assistant to Rep. William A. Dawson, Republican, of Utah.

Mr. Clepper

Henry Clepper (*The Conservation Association—an American Phenomenon*) is the secretary of the Society of American Foresters and is well qualified to sum up the contribution of associations to conservation endeavor in the nation. His is a familiar byline in AMERICAN FORESTS.

Cleveland van Dresser, author of a previous series in AMERICAN FORESTS on abuses under the mining laws starts a new series in this issue following a field trip to the Northwest.

Trevor Holloway (*How Britain Is Training Her Future Forest Workers*) is a free-lance writer from Westbury in Wiltshire, England.

Mr. Collingwood

Advent of a new administration plus the attendant changes that accompany such switch-overs point to the need for more intensive coverage of the Washington scene in the months ahead. Toward this end AMERICAN FORESTS has added to its staff **Albert G. Hall,** a former associate editor, to conduct the Washington Lookout column. This will allow **Harris G. Collingwood,** who has written Washington Lookout for the last two years, to devote his writing time to interpretative articles pointing up new trends as they pertain to forests and forestry. Mr. Collingwood's first article will appear in the February issue of the magazine . . . Mr. Hall, a forestry relations counsel and consulting forester with offices in Washington, is the editor of WHAT'S HAPPENING IN FORESTRY, a semi-monthly news letter to subscribers all over the United States. For two and a half years he served as editor of the JOURNAL OF FORESTRY, the publication of the Society of American Foresters. Mr. Hall's first column is appearing in this issue. Both Mr. Hall and Mr. Collingwood long have been prominent figures in the capital scene.

Mr. Hall

FOREST CLINIC

Trees get sick the same as people do. And the fact that insect pests and diseases today are destroying three and a half times more trees annually than fire is an indication that it is time to call in the doctor. Accordingly, *American Forests* this month is inaugurating a forest clinic department. The first consultation is provided by *Elmer B. Roth*, associate pathologist of the Division of Forest Pathology, U. S. Department of Agriculture.

Sgt. 1st Class Einar H. Ingman U. S. Army Medal of Honor

"The sergeant charged alone . . ."

THE REDS IN AMBUSH on the ridge had lain concealed, withholding their fire. Now they opened up. The two squads were trapped. Their leaders were wounded; others were dropping.

Sgt. Ingman took command. He reorganized the survivors, assigned fields of fire, encouraged the men to fight. A red machine gun opened fire. The sergeant charged it alone, neutralizing it with a grenade.

Then he tackled another gun. A grenade and a burst of fire knocked him down, badly wounded. He got up, reached the gun, and dispatched the entire crew. When his squad reached him, they found Sergeant Ingman unconscious—but 100 of the enemy fleeing in panic.

"Bucking the Communists," says Sergeant Ingman, "takes an awful lot of staying power. The G.I.'s have got it. You have, too, when you invest part of your hard-earned pay *regularly* in Bonds."

Bonds are first of all a cash saving for you. But they're also back of our country's *production power*. Which couples up with G.I. *fire power* to keep the peace for all of us.

Peace is for the strong!
For peace and prosperity save with U.S. Defense Bonds!

Now E Bonds pay 3%! Now, improved Series E Bonds start paying interest after 6 months. And average 3% interest, compounded semi-annually when held to maturity! Also, all *maturing* E Bonds automatically *go on* earning—at the new rate—for 10 *more* years. $18.75 can pay back $33.67. $37.50 pays $67.34. And so on. Today, start investing in U. S. Series E Defense Bonds through the Payroll Savings Plan at work.

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THE AMERICAN FORESTRY ASSOCIATION

919 SEVENTEENTH STREET, N. W., WASHINGTON 6, D. C.

A New Year's Message
From the office of the President

Dear Fellow Member:

In wishing you the happiest New Year ever, I would like to remind you that you are the most potent single force in American conservation. You always have been and you always will be. In the final analysis it is you who decides what we will do with our trees, our soil, our water, our wildlife—all our renewable natural resources. On your judgment hinge decisions of the utmost importance both to the present and to future generations. And in every case your only interest is the public interest, because you are the public.

This is a grave responsibility, a responsibility that can be met only by vigilant and well-informed conservationists. Your active support of The American Forestry Association and its principles attests to your vigilance. So does the presence of more than 5000 new members welcomed to the Association this past year.

But to keep you well informed is OUR job—that of the officers, directors and staff members of the Association. To that end your AFA this last year sought the counsel of forty thought molders in the nation on how best to make AMERICAN FORESTS the outstanding educational and informational publication in its field. Some of the suggested changes are being incorporated in eight additional pages in this January issue. More will follow, for we are determined to make AMERICAN FORESTS the most vital force of its type in the country.

However, being both vigilant and well-informed, important as they are, is not enough. The AFA member must also be responsive. The AFA member should put to work the tools and services the Association places in his hands. He should be an active crusader for all constructive measures sponsored by the Association.

Renewing your own membership promptly is not enough. The AFA member who is vigilant, informed and responsive can also greatly aid the Association by enlisting new members. When people outside the Association ask "What can I do to help?"—which they frequently do—the important first step is to initiate them into the AFA family.

The beginning of a new year is the traditional time for worthwhile resolutions: so let's resolve to carry on the work of The American Forestry Association in an ever-broadening scope.

Again a happy New Year!

DPJ/kk

DON P. JOHNSTON
President

By ALBERT G. HALL

PREDICTING IS AMONG THE MOST HAZARDOUS of occupations, even when the soothsayer has precedents and background upon which to venture his educated guesses. The Washington, D.C. scene is rapidly becoming bereft of the old guideposts to political trends in natural resource development and conservation. Drastic action is hoped for in many quarters, but drastic departures from the patterns of federal activities in conservation should not be expected.

THE FIRST REPUBLICAN ADMINISTRATION in 20 years is faced first with a thorough study of the effects of the legislation and expenditures of its Democratic predecessors. In the whole field of resources--renewable and unrenewable --it has inherited the report of the President's Materials Policy Commission, commonly known for its chairman, William S. Paley, as "The Paley Commission."

THE FIVE-VOLUME REPORT, "RESOURCES FOR FREEDOM," although predicated on the programs and studies of the out-going administration, cannot lightly be ignored by the new administration. In fact, the report, however weak or biased its critics may believe it to be, will doubtless be a major factor In a natural resources conference being called in Washington, D. C. in March by Resources for the Future, Inc. President-elect Eisenhower has given assurance of his support to the conference.

FROM THAT CONFERENCE WILL COME RECOMMENDATIONS for legislative and administrative action, as well as recommendations for action by non-governmental groups. The degree to which these recommendations will reflect the thinking of the out-going administration will depend upon the vigor with which the new administration exercises its "mandate" in behalf of states' and individual rights.

THREE OF PRESIDENT-ELECT EISENHOWER'S APPOINTEES--Governor Sherman Adams of New Hampshire, assistant to the President; Governor Douglas McKay of Oregon, Secretary of the Interior; and Ezra Taft Benson of Utah, Secretary of Agriculture--will have major influence on the development of policies in the field of renewable natural resources.

THE OPPORTUNITIES FOR SINCERE COOPERATION among federal, state and private interests appear to be unparalleled. For this reason, it is safe to predict that the new administration will not rush headlong into new programs or into expansions of existing ones.

IT IS RATHER TO BE EXPECTED that effort will be directed toward perfecting current activities, reviewing and strengthening policies and administration, in "squeezing the water" from appropriations and in trimming some of the unnecessary frills from all programs.

A PLANK IN THE REPUBLICAN PLATFORM calls for "an impartial study of tax-free federal lands and their uses to determine their effects on the economic and fiscal structures of our states and local communities." Additional emphasis has been placed on action toward study of the desirability of increased federal ownership of lands in a program proposal advanced by Laurence F. Lee, president of the Chamber of Commerce of the United States. (See AMERICAN FORESTS December 1952, p. 47.)

(over)

WASHINGTON LOOKOUT—(Continued)

FEARS THAT AN IMPARTIAL ANALYSIS OF LAND OWNERSHIP would result in a "land grab" by private interests or complete dissolution of the national forests are unfounded in the opinion of the writer. The current emphasis is more toward clarifying federal policies in land acquisition, determining the types of land that might best be administered by the public—federal, state and local governments—and the lands now in public ownership that should properly be in tax-paying private ownership. While action beyond the study stage is impossible of early accomplishment, it is reasonable to expect that the study will be authorized by the new Congress.

THAT SUCH A STUDY IS NEEDED has been recognized by The American Forestry Association in its Program for American Forestry. (Point 24 on federal, state and private forest ownership in AFA's Program for American Forestry recommends "A state-by-state study of the desirable relationship between federal, state and private ownership with a view to mutual understanding and agreement among all classes of forest owners as to further federal and state acquisitions." Point 25 in this program urges "realistic planning and agreement on future public forest acquisition, by either nation or state, in the light of present trends in private management and related conditions.")

INUNDATION OF TIMBERLANDS BY FEDERAL dam building and by clearing of timber from rights-of-way for federal power projects reduces permanently the area of productive forest land. These activities affect both public and private lands. Bills in the 82nd Congress to provide for (1) access to federal timberlands cut off by dams, and (2) for transfer of public lands to private ownership to compensate private owners of timberlands acquired for dam projects received no action. It is confidently expected that reintroduction of these measures will occur early in the 83rd Congress.

THE NEED FOR EXPANSION OF TIMBER ACCESS ROADS, especially into now undeveloped areas of the federal old-growth forests in the West has been ably expressed by both the U.S. Forest Service and Bureau of Land Management officials. While there will be a move for economy by the new congress, it is unlikely that any reduction in funds for access roads will be made. On the contrary, the budget will probably include increases for this item.

INCREASING PRESSURES ON THE NATIONAL FORESTS for development of wildlife and recreation have far exceeded federal appropriations for servicing these activities. During the war years and in the defense expansion since the war, recreational uses of the forests have not diminished. They have increased! As a means of providing for more adequate development, Congressman Boyd Tackett of Texas introduced into the 82nd Congress a bill to provide for the "earmarking" of ten percent of national forest receipts for recreation and wildlife. The bill never went beyond the hearing stage.

A SIMILAR BILL will be introduced in the new congress with a new sponsor, Congressman Tackett not having run for re-election. However, while support of such a measure has increased, opposition to it has increased even more. Basic quarrel with the proposed legislation lies not in opposition to wildlife and recreational activities but rather in the manner of appropriation. Sound budgetary principles would call for these activities to be justified as are most other activities with appropriate hearings before the budget committees.

NEW AND ADDED EMPHASIS ON FOREST RESEARCH is expected to develop from the recent appointment, by Secretary of Agriculture Charles A. Brannon, of a National Forest Research Advisory Committee. This group of representatives of non-federal agencies and organizations is purely advisory in character. At its first meeting in Washington, D.C., December 1-3, the committee was made acquainted with the various research programs of the U.S. Forest Service and other agencies within the department.

REORGANIZATION OF THE FEDERAL LAND MANAGEMENT AGENCIES along the lines recommended by the Commission on Organization of the Executive Branch of the Government (the Hoover Commission) can be expected to be brought to the fore, early in the 83rd Congress. However, it is unlikely that early action will result, especially so far as proposed transfer of Department of the Interior bureaus to the Department of Agriculture, or the establishment of a Natural Resources Department, is concerned. What is more likely to result is reorganization within the departments.

EDITORIAL

FORESTS AND FACTS

Forests are living things and subject to constant change. This variability in forests attaches great importance to the gathering of up-to-date facts on their general condition, management and protection. Such facts are provided in the form of periodic reinventories of the nation's forest assets. When intelligently interpreted, they enable men to chart courses for action for the good of forestry as a whole.

Ten years have now elapsed since the last full-dress inventories of the nation's forest lands. World War II was at the peak of its fury when the U.S. Forest Service and The American Forestry Association concluded that the end of the war would find forestry in a position of suspense and uncertainty. With blueprints on the overall forestry picture clearly indicated, both organizations launched independent surveys to dig out the facts.

This foresight provided the American public with detailed reports on the status of forestry in the critical period right after the war, resulted in a third American Forest Congress, and paved the way for a recommended point-by-point program of national action which, while it has fallen short of full attainment, still presents the best pattern for co-ordinated action laid down in recent years, and will eventually be achieved.

More recently, the U.S. Forest Service has proposed a new Timber Resources Review to be made in the light of the new emergency precipitated by the Korean situation and in view of fast-changing standards of management, protection and utilization in forestry. A comprehensive plan, it is subdivided into 13 separate tasks. Scheduled to start early this year, it will reportedly require two years to complete.

The Review, or TRR as it is more commonly called, was first presented to forestry groups for examination last year. It has met with a mixed reaction. In general, many groups are of the opinion it is too comprehensive in scope in its present form and needs pinpointing in terms of what is most important and needs doing first. Most groups are on record as favoring the inventory, growth and drain phases of the Review but are skeptical as to the merit of such tasks as "international aspects of forestry" and "estimated future requirements for future timber products."

Sharpest criticism has been directed at a task on the "status of management." Critics of this task—and the group includes people who have been critical of the aims and objectives of the Forest Service itself—contend the results of such a study might be used by the Service to exploit "regulation" concepts, or the idea that compulsory controls over private forest management might have a salutary effect in accelerating existing programs of education.

While the proposed prospectus will probably prove unwieldy in its present form and will be shaken down to emphasize first things first, the fact remains that the Review as a whole is well-conceived, is needed, and ought to be made. Moreover, it is the job of the Forest Service to make it.

The American Forestry Association recognized this at its annual meeting in Asheville, North Carolina, when its Board of Directors recognized the "need for the Timber Resources Review." At the same time, the AFA recognized the magnitude of the undertaking and urged that every effort be made to "conduct each phase of the Review with a proper degree of thoroughness." In the event the consideration of time and personnel would not permit such accomplishment with all 13 tasks, then emphasis should be given the inventory, growth and drain phases, the AFA said.

There is a need for an effective blueprint on just where forestry stands today and there seem to be no insurmountable obstacles standing in the way of making such a blueprint, nor as a matter of fact, of attaining a higher degree of cooperation on the part of all segments of the forestry movement than has been true in the past. At the conclusion of the American Forest Congress of 1946, Ovid Butler, then AFA's Executive Director, termed the "regulation" impasse as the "Gordian knot of a forest program" and observed "until that knot is cut by composing differences, one is forced to the conclusion that the best efforts to bring together different groups in common support of a national program will be stalemated."

Differences have not as yet been composed, but there is now an indication that the crux of the controversy—the spectre of federal regulation itself—may be fading into a limbo reserved for theories that fail to pass the test of public scrutiny. An old ghost may be passing out of the picture as a threat to future cooperation, and while it is probably true that forestry will eventually see a greater degree of regulation, the demand for it—when that time comes—will be based on the acceptance of an educated public. Meanwhile, statesmanship in forestry faces a real opportunity to close up the ranks.

Meet Ezra Taft Benson

. . . . . *New Secretary of Agriculture*

By RICHARD SQUIRES

WHEN Ezra Taft Benson of Salt Lake City, Utah takes over as Secretary of Agriculture this month, he will, at the age of 53, have two successful careers behind him.

Farm leaders throughout the nation know him as a dynamic spokesman for agricultural cooperatives who, in the space of 10 years, rose from a county agricultural agent in Idaho to executive secretary of the National Council of Farmer Cooperatives with headquarters in Washington, D. C.

His Utah neighbors know him as a member of the Council of Twelve Apostles—and seventh in line for the presidency—of the million-member Church of Jesus Christ of Latter-day Saints.

In neither of these careers was he active in Republican Party politics. As secretary of a council made up of members of all shades of political opinion, party identification was impossible. As a spiritual leader, it was prohibited.

Consequently, to those who consider appointment to cabinet posts as the accepted method paying political debts, Ezra Taft Benson would seem to lack the major qualification for the job. He did not actively support either party (he personally favored Sen. Robert A. Taft for Republican nomination); he does not come from an important agricultural state (there were several midwestern farm leaders who wanted the job), and he made no effort on his own behalf to get the appointment.

"I have never had any desire to run for or hold political office," Mr. Benson said after his appointment. "I was appointed to an agricultural advisory committee during Gov. Dewey's campaign in 1948, but I met with it only once. I did not know I was even being considered for secretary of agriculture until Nov. 20" (three days before his appointment was announced).

Yet, while Mr. Benson never sought political office, his education and training through all of his adult life were in fields that would most qualify him for the nation's top agricultural job. And while the new secretary will not make any definite statements on policy, his general views towards price supports, cooperatives, conservation and public land policy, are, to a great extent, revealed by an examination of his past activities as a farm and later religious leader.

During his period of service with the national council, Mr. Benson became identified as a "middle of the roader" in farm policy. That his appointment was hailed by both the American Farm Bureau and "found acceptable" to the National Farmers' Union is ample indication of this fact.

A supporter of agricultural cooperatives, Mr. Benson also has been outspoken in his opposition to farm programs which tend "to lean on government aid."

While agreeing that cooperatives are an effective means of meeting the complex marketing problems farmers face today, Mr. Benson said recently that he does not believe cooperatives should become an end in themselves.

On other matters of agricultural policy, he is expected to take the same moderate point of view.

He was endorsed by the Utah Woolgrowers Association, and the National Livestock Producers Association were described as "well pleased" with the appointment of Mr. Benson. This however does not mean he is committed to any policy that would favor the rights of livestock owners over others in the use of public lands and national forests.

During the course of an interview in Mr. Benson's modest but well-appointed office in the LDS church's office building in Salt Lake City, a reporter remarked upon the beauty of the colored enlargements of outdoor forest and mountain scenery which covered walls not taken up by pictures of church leaders.

"My favorite recreation is to get on a horse and ride into our mountains, and I do so whenever possible," he remarked. When pressed as to his attitude towards the U. S. Forest Service, the new secretary said:

"I have always counted some of my best friends among the forest service and I have been favorably impressed by the work it has done in Utah," he said. Further, he would not go. "I cannot at this time comment upon conflicting policies on use of forest lands," he said.

The conservationists can be assured, however, that the new secretary of agriculture is familiar with the need for preservation of watershed and forest areas. Utah's communities for the most part are nestled against the Wasatch Range which bisects the state, north to south. They depend upon the natural forest reservoirs for their culinary and irrigating water and the state has had disastrous examples in the past of the danger of denuded watersheds—flood disasters that have resulted in reforestation projects and grazing limitations.

As a church leader, Mr. Benson last year toured some of the high forest lands of the state. He also is concerned with the economic well-being of the hundreds of farmers—about 70 per cent of them members

(*Turn to page* 31)

Meet Douglas McKay

..... *New Secretary of Interior*

By JOHN B. WOODS

AT eight-thirty on the morning of November 20th a long-distance call came through to the comfortable white shake house overlooking downtown Salem, in Oregon. Crisply a by now familiar voice began: "Governor, this is Eisenhower. I understand that you will accept the appointment . . . Very well, then, I'll release the news within an hour."

Thus national recognition came to Oregon, through selection of a favorite son to serve importantly in the new Republican Cabinet. Douglas McKay, 25th Governor since statehood and 37th to bear the title since the Hudson's Bay Company ruled the territory had been offered and had accepted nomination as Secretary of the Interior.

The appointment might well be called a "natural," for few men are as well posted regarding the resources with which Interior concerns itself, and the motivations affecting public and private agencies with which the Department must deal, than this grandson of Northwest pioneers who for 20 years has served as legislator and public executive in Oregon.

To say that Governor McKay's neighbors and other friends were surprised is, of course true, simply because few of them ever thought of him as looking for new worlds to conquer. Many know that long ago he declined offers to enter business advantageously in the East, saying at that time that he would rather be poor and contented in Oregon than wealthy and harried in New York.

But the governor knows that when he leaves the comparative tranquillity of Oregon's statehouse for an office in the nation's capital he will be fair game for political snipers.

Asked December 4 what he thought was in store for him as Eisenhower's Secretary of the Interior, McKay was quoted by the Associated Press as saying: "I know that soon after I take my new job on January 20, a lot of people in the West will begin calling me bad names. Because I'm a Westerner they will think I'll give the West preferred treatment. But I'm not going to be Secretary of the Interior just for the West. I'm going to represent the whole United States. I won't show any partiality for any section of the country for the same reason that in my five years as Governor, I haven't shown any partiality to any county."

Gov. McKay told the Associated Press he knows he'll be subjected to intense pressure from both sides over federal construction of power and reclamation projects — that he'll make enemies no matter what his decisions.

A clue to how the Secretary-designate feels about "too much federal government" in the disposition of our natural resources may be found in an article, *Oregon States Its Case Against Socialized Forestry,* that Gov. McKay authored for the January, 1951 issue of AMERICAN FORESTS.

Wrote the governor two years ago: "Today, the sacred principles of local self-government are threatened by Valley Authorities, which would dilute local and state governments to water-weak impotency, and by a host of other weird proposals to socialize various segments of our social and economic structure. . . . To Oregonians, by far the most arrogant of these dangerous schemes is the proposed federalization of the nation's forest lands (Sen. Clinton P. Anderson's forest regulation bill) . . . We want no federalization of our Oregon forests. We want no meddling with our proven methods of tree roots forest management. We are all neighbors here in Oregon, whether we work for the state or for industry, and we want to run our own affairs as every true son of the West has done for a century or more. Let those who would impose carpetbagging, socialized, push-button forestry on us first look to their weapons, for they will get a fight in Oregon."

And in that article can be found perhaps another reason why few Oregonians have thought of their Governor in terms of national politics. It is that they regard Oregon as more real and vital than any other state or even the country as a whole—at least

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Fabian Bachrach photo

Gov. Sherman Adams

Adams Gets Top Policy Post

Selection of Governor Sherman Adams of New Hampshire as top executive assistant to President-Elect Dwight D. Eisenhower is heart warming news for conservationists all over the nation. It assures them of a strong and authoritative voice in one of the most influential offices in the nation. As the No. 1 adviser to the new President, Governor Adams will have a

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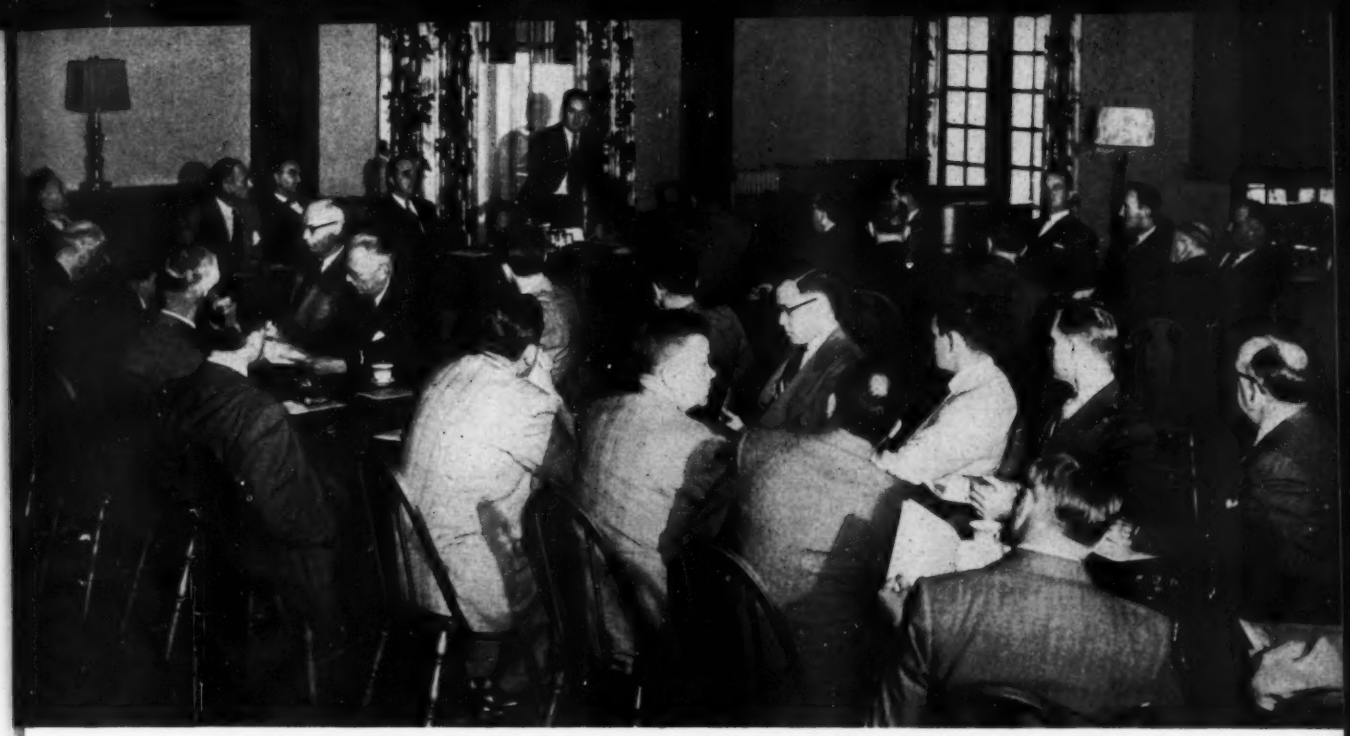
The PEOPLE in PULP and PAPER

Why are working relationships between pulp and paper firms and their workers in forest communities among the best in the nation? The answer, as one company official put it, is simply "doing what comes naturally"

By NARD JONES

This museum on the art of papermaking was given to the people of Dalton, Massachusetts by the firm of Crane and Company

The Information Service of the Wisconsin Paper Industry stresses "communications" such as the displays shown below as one of the strongest links between paper firms and their workers



Workshops are an integral part of pulp and paper's "good neighbor" program. Above, Wisconsin paper officials listen to a talk by M. J. Schulenburg, of the Kimberly-Clark Corporation

FROM earliest days our forests have been related in a vital way to the communities of America. And despite the great and comparatively swift transition from scattered pioneer settlements to modern towns and cities, that intimate relationship has changed far less than is generally believed.

To see why and how this is true, let's examine the so-called "community relations program" one of the leading growers and users of our modern forests, the aggregate manufacture of woodpulp and paper, now the sixth industry in the United States. Even those industry men most actively connected with the program will admit that it's called "community relations" for lack of a better term. A wide semantic search unearthed no word or two which would adequately describe this remarkable continuation of the old relationship between the growing forests and the settlement in the clearing.

"If it were actually a program in the commonly accepted sense," said a well known pulp and paper industry executive the other day, "and if it *could* be formalized, I would guess that our own policy would be simply this: Be neighborly. Be natural. Be cooperative in matters of broad community interest. Find out what we are doing wrong, and do less of it. Find out what we are doing right, and do more of that!"

The fact is, the reason why the community relationships of the pulp and paper industry are basically unlike the better known "public relations programs" of many big industries lies right within the forests themselves. A community based on the growth and use of forests never was quite like any other kind of community. It never will be.

The clearing of a part of a forest for agricultural pursuits was the start of every pioneer settlement. The uses for the cut timber were, in the beginning, the essential uses: for homes, then fuel and fences. These had to be followed quickly by furniture and crude farm equipment. All these things, at first, were in reality by-products of the clearing of the forest for agriculture. Nonetheless they were the start of American industry integrated economically with that agriculture.

Thus the forests were at once a problem and a necessity. They were not, in the beginning, the protection and the source of cultural satisfaction they later became. Beyond the first clearings and the thin blue smoke from the squat stone-chimneys the forest was mysterious and sometimes impenetrable. Vast potentials for America were in those depths, and dimly understood. But so were several dangers.

Therefore those first and virgin forests were somewhat like the sea in the sea's timeless relationship to its coast villages. They were a lure, a challenge, a livelihood, protection and danger, all rolled into one.

This was and is the foundation of the relationship between man—in his work and play and general happiness—and trees. It is as old as man and nature in their relationship together. Obviously it could not be destroyed by time and events, unless these saw the destruction of all trees and all men. Equally apparent is the fact that such relationship could hardly be the invention of public relations experts or the result of "a program."

However, for the past two years the pulp and paper people have been moving in a more conscious way to preserve and enhance this old relationship between community and forest, to make more certain its adaptation to the growing complexity of the industry and to insure that it is not literally over-run by "civilization."

Which is why a new employee of one large paper mill is pleasantly surprised to see his photograph on the main bulletin board just a few minutes after he's been hired. He's being introduced to his neighbors in the mill, but hardly expected it to happen so quickly, informally, and completely. Doubtless he didn't notice that when his picture was taken for the next issue of the company magazine it was snapped with one of those new cameras which produce the printed photograph within a minute or two after the shutter clicks.

The industry-wide move to preserve the old relationships is why, too, a group of northern midwest

pulp and paper mills sponsors a summer camp where, from Spring until Fall, almost a thousand high school students from nearly a hundred schools attend workshops to study natural resources management.

It's why employees of many mills find themselves interviewed when they decide to quit as well as when they apply for jobs. The resigning employee isn't quizzed — although the personnel department may indirectly learn a thing or two. He's simply getting a pleasant and neighborly goodbye and receiving best wishes for his future.

Not long ago a retired employee of a paper mill near a small western town found himself on a rodeo committee which needed to build some grandstands. They wanted to be sure they were engineered for safety, but there was no money for this type of service and no engineers on the committee. The retired employee thought he'd try the public relations supervisor at the mill to see what could be done. When he found that official out of town, he said he'd come back later. But the resident manager overheard the request and called him into his office. "Hellsfire, Frank, we're all public relations people around here. Our engineering department will draw those grandstands for you—and if they're too busy I'll do it myself!"

Last Fall the manager of another mill won, inadvertently, a national citation for helping the blind. What he'd done was adjust certain jobs so that blind folks and their seeing-eye dogs could get on the payroll. No order had drifted in from headquarters to try this out. It did become very excellent community relations, and good public relations for the company. But the manager had neither of those things in mind, nor was his action an item on a program. It just seemed like the thing to do.

This doing what comes naturally was, of course, the very essence of the pioneer neighborliness of those communities in the forest clearing, and so it's the essence also of the present nation-wide activities in the industry. Unfortunate as it may be, when neighborliness is multiplied by nearly a thousand pulp and paper mills in as many communities it almost *has* to be called a program, simply for want of a better descriptive term.

What the program amounts to, when you boil it down, is a lot of mills and communities getting together regularly to exchange information as to how others do it. But if this neighborliness comes naturally, to most of us most of the time, why is that necessary? The answer is that it wouldn't be necessary, in all probability, if in the past decade the pulp and paper industry had not been growing so fast.

Furthermore, one amazing characteristic of the industry is that it literally seems never to *stop* growing. It has never returned to a previous production "low" and its potential may be better understood in the light of the fact that, as lumber consumption per capita declines, the per capita consumption of paper increases. The latter is now close to 400 pounds for every man, woman and child in the United States. That is almost twice what it was in 1926. And the industry's growth since World War II has been particularly dramatic, not only to meet the domestic demand but also to supply an enormous part of the Free World as well. This country now produces around 26 to 28 million tons of paper every year!

Inasmuch as such tonnage requires vast amounts of wood cellulose fibers, the industry has been in the forefront of numerous programs which in themselves represent the finest regard for community relations — namely, the programs conducive to perpetuation of our forests and raising trees as a crop. What's more, the very manufacture of woodpulp and paper represents a high degree of wood utilization. The mechanical and, to a larger measure, the chemical separation of the wood fibers from other "contents" of a tree involves very little waste of wood indeed.

The characteristics of pulp and paper manufacture dictate that most mills be located with reference to wood, water and power, each required in quantity, rather than with reference to market alone. For this reason, the great majority of pulp and paper communities are relatively isolated. In many of them pulp and paper represent the single industry.

It may come as a surprise to many outside the industry that, despite this relative isolation of the mills, labor supply is not nearly the problem it is to other industries of comparable size. Those who work in pulp and paper seem to find its generic type of community an attraction rather than a disadvantage. Usually they are people accustomed to working in or near the forests. They have a preference for outdoor recreation, are usually devotees of camping, hunting, fishing, and in general are a hardy and happy tribe who find the occasional visit to the

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Pulp and paper "open houses", widely-emulated by industry generally, represent a sure fire way to make friends. Some companies issue special invitations to newcomers to the community

Forester Dick Power (right) set up a sawmill when he discovered an untapped "forest" right in New York City

NEW YORK'S WATERFRONT LUMBERJACK

FORESTS of potential sawtimber he discovered nine years ago along New York City's waterfront enabled a young forester by the name of Richard J. Power to launch a successful sawmill operation right in the shadow of the Statue of Liberty.

Driving along the West Side overhead highway and pointing in the general direction of Wall Street, Power comments, "Some nice white pine waiting to be plucked down there. And west of the Empire State Building we'll pass about a half million board feet of real good oak. There's some first rate yellow pine over near Hoboken, too."

A stand of Power's "trees"—pier piling waiting to be plucked. Crane at left pulls the 85-foot logs out of river-bottom muck

Photos by Richard F. Dempewolff, Popular Mechanics Magazine

Power, of course, isn't talking about growing stands of timber in the usual sense of the term. His is a salvage operation. Nine years ago while working at various shipping points for the War Production Board, he noticed stacks of discarded piling from waterfront piers. These logs, ranging from 65 to 85 feet long, were either hauled off and burned or left to rot in some out-of-the-way piling graveyard.

"I did some investigating and learned a few things," Power says. "In spite of what you may have heard, salt water doesn't rot wood. It preserves it. Only the sections of the piling exposed to air by the rise and fall of tide rots away. The rest is first rate timber."

The average pier has about 1,000 piles, running 14 to 20 inches across the butt. An 85-foot log of such dimensions will yield about 500 feet of sawtimber. Pier 43, owned by the Rogers Construction Company, had 1300 piles that yielded 650,000 feet of sawtimber—all white pine. When it was dismantled old timers on the waterfront recalled how those white pine logs were rafted down the Hudson River from upstate New York 40 years ago. Forty years is the

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No, it's not an atomic explosion—it's a charge of TNT set off to put a potential snow avalanche out of commission

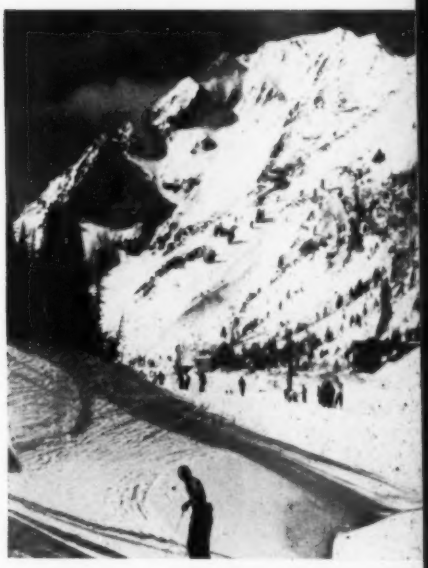
How To Tame An Avalanche

An avalanche expert must be able to read a mountain's mind—and not get carried away by his work

Pictures and background material by Ralph A. Wiese. U. S. Forest Service

In probing for slide victims, poles permit recognition of a body by "rubbery" contact

Snow cracks open at "fracture point" as snow ranger skis down a potential slide



Rustler Face, Alta, Utah—a notorious slide path that has to be constantly controlled

SNOW RANGER Ralph A. Wiese is a man who breaks the backs of incipient snow avalanches before they slip loose from their moorings and kill somebody. Ordinarily he knocks off a dozen or more potential avalanches a year out in the Mt. Baker, Washington, skiing area which he patrols for the U. S. Forest Service.

To do this, Wiese skis out on the smooth faces of prospective slides, cutting them inches above their "fracture point"—the point of greatest convexity on the slope. The pressure from his skis causes the snow to crack open with a snap at the fracture line. Then it goes cascading down the slope piling up at the bottom to heights of 50 and 60 feet.

Wiese's expertness in judging the fracture point—so that he will not ski below it—is attested by the fact that he has not taken a fatal ride with one of his own avalanches. There are other methods, mainly blasting with TNT blocks and with artillery. TNT blasting has been used at Baker but Wiese prefers the skiing method because it is speedier. However, after a recent narrow escape from being "carried away by his work" the snow ranger has decided that blasting is best.

Avalanche control work was first inaugurated by the Forest Service in 1937-38. It was necessitated by the great growth of skiing in the United States. Today avalanche control work is being carried on for the protection of skiers at Alta National Forest in Utah; Berthuod Pass in Colorado; Mt. Baker, Snoqualmie Pass and Stevens Pass in Washington; and Mt. Hood in Oregon.

Slides not only threaten skiers.

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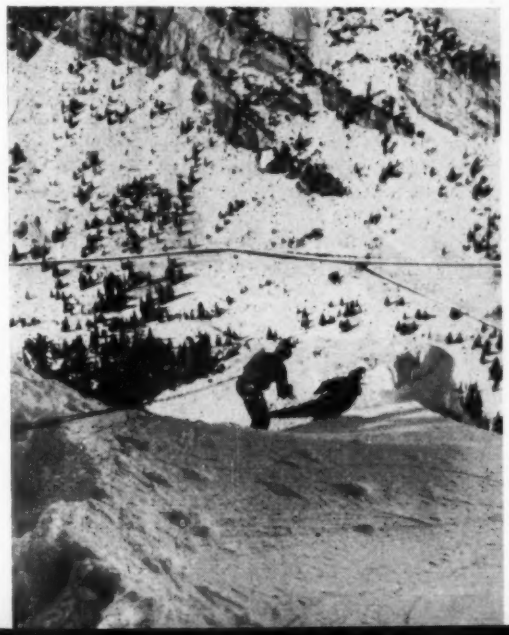
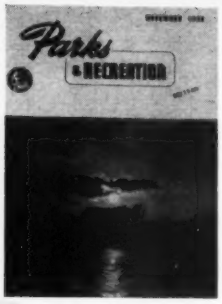
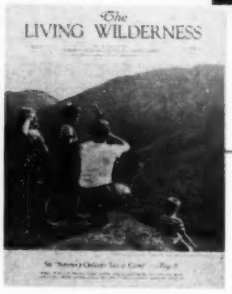
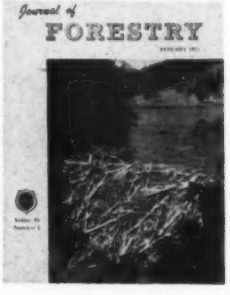
Snow Ranger Wiese sets a charge of TNT at point of greatest convexity on slide slope

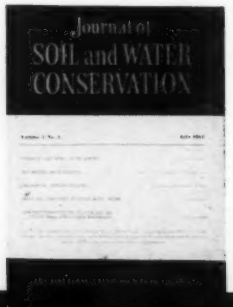


The blast sends tons of snow cascading down the slope and another hazard is liquidated









"The Americans of all ages, all conditions and all dispositions constantly form associations. They have not only commercial and manufacturing companies in which all take part but associations of a thousand other kinds, religious, moral, serious, futile, restricted, enormous, or diminutive. The Americans make associations to give entertainments, to found establishments for education, to send missionaries to the antipodes, and in this manner they found hospital, prisons, schools . . . Wherever at the head of some new undertaking you see the government in France or a man of rank in England, in the United States you will be sure to find an association."

From Democracy in America
by ALEXIS, COMTE DE TOCQUEVILLE
(1805-1859)

The conservation movement, initiated and supported by citizens' associations, has been a characteristic American phenomenon. Today there is not a single renewable natural resource that hasn't one or more—usually more — associations concerned with its preservation, management, and wise use.

Thus, there are not only associations dedicated to the conservation of the living resources, such as forests, grass, and wildlife, but there are associations working with special aspects of these resources. In addition, some organizations are devoted principally to soil and water con-

An American phenomenon, the conservation association is one of the most unselfish, public-spirited, and useful institutions conceived in the collective wills of men

The Conservation Association

By HENRY CLEPPER

servation but with related objectives with respect to flora and fauna.

There are associations, national and international; regional, statewide, and local; associations each with many thousands of members; others with a couple of dozen. There is an international association for the protection of all nature, everywhere in the world; there are others that limit their interest to a single species of plant or animal.

In short, conservation associations have as many manifestations as human ingenuity can devise. They are a unique and significant aspect of current Americana. Most, if not all, have a strong flavor of crusading zeal in their make-up. Even those exclusively scientific and professional in their membership are mindful of public relations, and strive mightly to gain public support for their cause.

Manifestly, the conservation concept has become so deeply rooted in our American way of life, and actual accomplishments have been so tremendous, that a whole generation has grown up and benefitted from the progress made without knowing how the movement started or what kept it going. Granted time, energy, and interest in the subject, a historian might write a learned book on the role played by conservation associations in our national development. This article is merely an introduction to the fascinating subject.

While the writer is not a trained historian, he claims some modest competence to deal with this subject for he has long been the executive secretary of a conservation society and is a dues paying member of a dozen others. In his considered opinion the conservation association is one of the most unselfish, public spirited, and useful institutions conceived in the collective wills of men to make this a better nation in which to live.

Pioneer Organizations — Although wildlife was still relatively abundant in America during the first part of the 19th century, game populations had already declined in some localities in the East. Sportsmen began to organize for the conservation of wildlife in several eastern states as early as the 1840s.

However, the first national organization for the preservation of wildlife was concerned not with game animals but with aquatic resources. Astonishing as this statement may appear, it is understandable if one recalls that the colonization of America was successful in part because of the abundant fresh and saltwater fisheries. Indeed, a declared objective of the founding of the colony at Plymouth was "to serve God and to fish."

The American Fisheries Society, organized in 1870, is believed to be the oldest conservation association in America still in existence. It has a notable record of achievement. A year after its founding and through its efforts, the federal government established the United States Fish Commission, which in 1903 became the Bureau of Fisheries, and which in 1940 was reorganized into the Fish and Wildlife Service.

Relatively speaking, a small association as regards membership, the American Fisheries Society has had a useful and honored career over a period of some four score years. Millions of Americans who have never even heard of the Society have benefitted in diet, health, wealth, and sport from its conservation activities.

Rise of Forest Conservation — One of the earliest recorded actions by an association to assure the conservation of a resource — an action that has resulted in a whole series of chain reactions — was taken just 80 years ago. In 1873 the American Association for the Advancement of Science, which itself was organized in 1848, focused attention on the need for preserving the nation's forest resources through a memorial recommending that the Congress enact legislation for the study of forest conditions and for forest protection.

Two years later a group of citizens met in Chicago and organized The American Forestry Association to gather and disseminate information about forest conservation, and to provide a stimulus to federal and state action. From the start an aggressive and militant organization,

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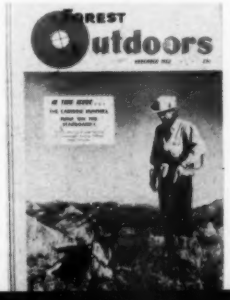

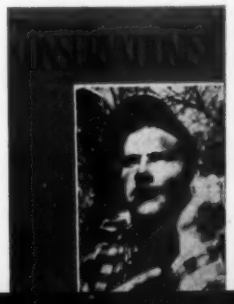

Abuses Under the Mining Laws

The Great Road Block

MINING claims as authorized under the general mining laws of 1872 today constitute a road block in the proper management and protection of large segments of national forest land in the West. Far too often these claims are interfering with the other uses and values of western forests without creating offsetting values. There are hundreds of cases in which unpatented claims are holding up timber sales, road construction, development of campgrounds and other recreational facilities, or monopolizing water needed in the grazing use of the forests.

Right now, harvesting of 350 million board feet of mature timber under a Forest Service-industry agreement in the Lolo and Clearwater forests in Montana and Idaho hinges on the completion of a 40-mile road that is being bogged down by a rash of mining claims that have sprung up like mushrooms in its path. Exorbitant fees for rights-of-way are being demanded by these claimants, many of whom have never made any effort to work their claims. This means costly litigation to secure rights-of-way and months and months of delay.

Such practices are not the acts of legitimate mine owners and operators. And let it be said at once that these charges do not apply in the case of the many legitimate mine owners and operators. On the whole, the Forest Service and the Bureau of Land Management have good working relations with these legitimate operators. But it's a different story in the case of the individual who seeks personal gain at the pub-

Logging operations like this loading job are being held up by opportunists who stake a mining claim for personal gain other than from minerals

Some mining claimants in the west even build luxurious cabins on their claims

Mining claimants often demand big fees for rights-of-way to timber like this

By CLEVELAND VAN DRESSER

Building of a road needed for the harvest of 350 million bd. ft. of timber is bogged down by claims that don't even produce minerals

lic's expense by twisting the mining laws in quasi-legal land manipulations. In scores of instances, claims are being turned to every use except legitimate mining, often in a way quite contrary to the public interest.

Last year, AMERICAN FORESTS *published a series of three articles by Mr. van Dresser dealing with mining law abuses he uncovered as a result of field trips in 1951 to national forests in Colorado, New Mexico and Arizona. The series created much interest with a number of readers suggesting that Mr. van Dresser should continue his studies on the problem. This resulted in field trips to national forests in Montana, Idaho, Washington and Oregon last summer. "The Great Road Block," appearing on these pages, is the first of three articles Mr. van Dresser has prepared on his findings in the Northwest.—Editor*

As set up under the general mining laws of 1872, mining claims are guaranteed rights-of-way over all other uses of the national forests. All a mining claimant has to do is to set a few stakes to mark his claim and record it at the county courthouse, and he is in full possession. Then if he can show that he has enough mineral value to justify a "prudent man" in developing the claim, that he has done $500 worth of development work, and that he has made the required location survey—costing perhaps $500—he can get permanent title to the claim by paying the United States about $5 per acre for a lode claim and $2.50 per acre for a placer claim.

However, a claimant does not have to patent the claim to protect his exclusive possession. He can do so by merely keeping up the annual "assessment work"—$100 worth of development each year, which often is the labor of the claimant alone. And this requirement has often been waived by Congress.

Conceivably, these conditions would not be too great a price for the public to pay in encouraging mining on public lands providing all or a majority of the claims had produced essential minerals. But they haven't. Less than 15 percent of patented claims have produced ore in commercial quantities. Less than three percent of the unpatented claims appear to be producing ore. This means there are 780,000 acres of patented claims and more than 1,750,000 acres of unpatented claims that are not carrying out the basic intent of the mining laws. It adds up to the fact that more than 2,500,000 acres of national forest land is tied up in an era when the demand for the use of all national forest resources is constantly enlarging . . . increased demands for timber that have trebled in ten years and range land for livestock producers.

The situation that exists today in the Lolo National Forest in Montana and the Clearwater Forest in Idaho is a good case in point. Under an agreement made by the Forest Service and a private corporation, a 40-year timber harvesting operation was mapped out whereby the Forest Service sold 350 million board feet of timber to the company in the two forests. The deal calls for the construction of a large plant and sawmill and to augment the arrangement, the company has added an additional 150 million board feet of timber on its own lands adjacent to the two national forests.

But the success of this multi-million dollar proposition hinges on the construction of 40 miles of road costing a million and a half dollars to provide access to the timber. As mapped out, half of this road will be in the Lolo and the other half in the Clearwater. And what with the rights-of-way in the form of mining claims that have already been adjudi-

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On the whole, USFS and BLM have good working relations with legitimate mine operators. With individuals who twist the laws it's another story

Central Crown Office photos

Students notch-plant spruce near the twin Myber lakes, in North Wales, Various methods were discussed before students decided on notch planting

How BRITAIN Is

MANY readers will know that Britain is embarked on a 50-year plan to increase her forest acreage until a target of five million acres is reached. This acreage, it is estimated, will yield one-third of the country's timber requirements and insure an adequate reserve to meet any serious emergency.

The program entails restocking and maintaining two million acres of existing woodland and the creation of new forests on three million acres of moors and mountain land that are agriculturally unproductive. It will be appreciated, therefore, that the recruitment and training of the thousands of additional workers required to insure the success of the scheme is no light undertaking.

How is the problem being tackled? The answer provides American readers with an opportunity to compare Britain's training methods with those of their own country.

The personnel employed in British forestry is graded into four main classes—the forest worker, the foreman, the forester and the forest officer. The forest worker forms the backbone of the service and carries out the manual and practical work. These men are recruited through local labor offices and every effort is made to find them a post in the county of their choice and to secure them a house. Large numbers of houses for forest workers are built, or are being built, but it will be some years before all recruits can be so accommodated. Training consists of a year's practical instruction in a state forest or on an approved private estate. Special proficiency allowances are paid to selected men and there is opportunity for a man to graduate to the status of ganger.

The training for foremen and foresters, who supervise woodland areas or forests, is given free of charge in residential forester training schools, staffed and run by the Forestry Commision, and allowances are paid during training. There are now five of these schools in operation—two in England, two in Scotland and one in North Wales. The full course to qualify for the forester grade takes two years, but the course is so arranged that at the end of the first year men who will obviously be unable to make the grade may be granted a foreman's certificate. Men who complete the course satisfactorily are eligible for service either with the Forestry Commission, the Colonial Forest Service or with private owners of woodlands.

Foresters-to-be soon learn fencing is one of first essentials in forest area

Courses cover every job in forest, from seed extraction to loading of produce

Student E. K. Cox, a former engineer, marks trees for high pruning

Tiny mountain pines thrust through granite chippings put on seed beds to prevent crust

Training Forest Workers

By TREVOR HOLLOWAY

Entry to these schools is normally restricted to men between the ages of 19 and 30, but time spent as regular service in H. M. Forces may be deducted, subject to an age limit of 40 years. A reasonable knowledge of English, arithmetic and general subjects is required and the applicant must undertake to complete six months practical training before taking up the course.

I asked John Goodwin, chief instructor at one of the schools situated in the Forest of Dean, Gloucestershire, to give me a broad outline of his set-up. "Our aim," he said, "is to produce men who can supervise the actual work in the forest—men who themselves are competent in the use of all types of tools and have a sound knowledge, based on personal experience, of a fair day's work on all forest operations. Thus the men spend half to two-thirds of their time under instructors on practical work.

"The theoretical training covers the same ground to a less advanced level as the university degree course, but always with a practical basis. The two sides of the training are supplemented by tours to state and private woodlands within a 100-mile radius of the school and to nearby industries using forest products. Aspects of the training which loom large in the syllabus are fire fighting, general silviculture and in particular the establishment of new plantations and the rehabilitation of old woodlands, as well as surveying and mensuration.

"We try to train men to shoulder responsibility and handle men, to think for themselves as well as carry out work designed by others.

Elementary surveying is taught to all British forestry students

Here is a brief summary of the syllabus used for the two-year course at the forester training schools. The first term includes a study of the anatomy and physiology of herbaceous and woody plants and an elementary introduction to fungi and bacteria. Silvicultural subjects touch on such matters as preparation of the ground, ploughing and draining, fencing and warrening, and seed collection and storage. Trainees are given an introduction to fire protection and forest records—time book, pay list, progress reports and so forth, and a grounding is given in mensuration.

In the second term botanical studies embrace seed, seedlings, bark, cones, etc., of a wide variety of trees. Silviculture is continued with planting, beating up and nursery management. There is advanced training in fire protection and mensuration and the study of soils is begun.

During the third term nursery management is much to the fore—selection of site, green cropping, blow lamp weeding and protection, etc., being dealt with from the theoretical and practical angles. There is also much practical surveying, felling, extracting and preparation of produce.

Britain's plan to grow one-third of her timber requirements within 50 years has meant a great increase in the number of forest field workers

The second year starts with considerations of thinning, direct sowing, natural regeneration, conversion of coppice to high forest and other advanced silviculture topics. Uses of timber, seasoning and preservation and tools and tool maintenance also come into the syllabus at this stage. So does timber identification and civil engineering in respect to forest roads, bridges and culverts.

A special feature of the training is the interchange between schools in widely dissimilar areas, of the second year students for the second term. This provides not only variety of instruction but of forestry technique and methods due to differing climatic and topographical conditions.

The last term of the course is devoted to working plans, forest and nursery machinery, surveying, estate work and conservancy records. Much of this instruction is given by top-grade conservancy officers.

Recruitment to the forest officer grades is usually to the rank of district officer, grade II, superior posts being normally filled by promotion. Vacancies to the grade II rank are filled by successful candidates from open competition which is advertised in the national press. The competition is arranged by the Civil Service who appoint a selection board to interview candidates. The would-be forest officer must have obtained a university degree or diploma in forestry, or a post-graduate degree in a forestry subject, and normally be between the ages of 21 or 28 years.

University courses in forestry are normally available at the universities of Aberdeen, Edinburgh, Oxford and University College of N. Wales (Bangor). Those who wish to take such a course are generally required to have passed matriculation or a similar examination. Space forbids details of all these courses, so we will confine ourselves to that of Edinburg University for the Degree of B.Sc. (forestry). This course extends over three academic years and the subjects taken are:

First year: Chemistry, botany, zoology and physics.

Second year: Geology, meteorology, forestry I (silviculture, forest protection and mensuration), forest botany, soil science and engineering; surveying (engineering field work); tropical and sub-tropical forest trees (optional).

Third year: Forestry II (advanced silviculture, forest policy, law and administration and economics); forest utilization, including chemistry of forest products; forest pathology and zoology.

Practical Courses: In the first year a three weeks' course in the Easter vacation and a further three weeks' course at the beginning of the summer vacation are devoted to practical work in the nursery and in the forest.

In the second year courses of similar duration are devoted to practical studies of silviculture and management. In the third year the Easter vacation and final summer term are entirely devoted to silvicultural and management studies including the preparation of a detailed forest management plan.

Advance post-graduate studies are provided for in the principal forestry subjects and in soil science, pathology, entomology and forest botany.

A much-used center for forestry training in Britain is Northerwood House, fittingly situated near Lyndhurst in the heart of the New Forest. This house was donated to the forestry commissioners in 1945 by Major Herbert Aris, on the understanding that it should be used to promote forestry education.

Northerwood House was opened in June 1947, when the first visitors were the leading delegates to the Fifth British Empire Forestry Conference. Since then it has been almost continuously occupied, partly by forestry students from the universities who come to the New Forest during the vacations for practical instruction on working plans, etc., and partly for short instruction or refresher courses given to members of the commissioners' staff and to various outside bodies. The house has also been found a convenient center at which to hold interdepartmental and other meetings. During the first four years of its existence as a forestry center the house was visited by 1700 students representing 90 groups. During this period 34 short courses were taken by commission officers and there were six special forestry courses for landowners and land agents and seven courses for timber merchants and their employees.

The current program includes courses on estate woodland management and forestry practice for private woodland officers; fire protection, nursery, utilization and silviculture courses for foresters and district officers; forestry practice for timber merchants' employees and special courses for clerical staffs.

A heartening feature of forestry training in Britain is the fact that although forestry is by no means the highest paid of jobs available, there is a steady flow of new recruits. Many men, in fact, have sacrificed better paid careers because of their love of trees and the healthy open air life the work offers. This is the type of man that any forestry authority should welcome to its woodlands with open arms.

The theoretical side of drainage, essential prerequisite of most hill forestry programs, is a fundamental class

. . . In the Northwest

Tips on Horse Logging

By ELMER W. SHAW

HORSE loggers are staging a comeback in the Pacific Northwest — not in the big timber this time, but in thinning the young growth.

More than half of the forested area in the Douglasfir region of Oregon and Washington is in young growth timber. Many of these young forests need thinning, but they are often so dense that tractor logging would be too destructive. That's where the horse loggers come in. A skilled teamster with a good horse can skid the small logs and poles through the dense stands with hardly any damage to the reserve trees.

Farmers and small woodlot owners who have seen this opportunity are becoming part-time horse loggers. Some hire out to big logging companies during the slack season; some form small gypo outfits, and others log for themselves on their own land. But not everyone can become a good teamster, or horse skinner as he was called in the old days. It's almost a lost art. Neither is every horse satisfactory for work in the woods. Both require special skills and adaptations.

For example, on one thinning show on the Olympic Peninsula, a contractor tried to use a horse that had never worked in the woods before. The teamster was also inexperienced and results were disappointing (to use an understatement). But when the horse was replaced by one accustomed to that type of work, everything went well.

What, then, are the requirements of a good woods horse? First of all, he should be calm and steady. A horse that is highly excitable or nervous is apt to get himself and the teamster into a lot of trouble. It is much better to have a horse that is slow and steady than one that works by jumps and jerks. The horse must be able to handle himself well on moderately rough ground, in brush, slash, mud, and sometimes in very close quarters. For most thinning work, a medium sized horse is better than a big one. Horses over 1800 pounds are generally rather awkward and hard to handle in a dense young forest.

Another basic requirement is horse sense. A horse without it is practically useless on a logging show. A good teamster with a well-trained horse relies more on "Gee, haw, whoa, back, and get-up" than he does on the whip or the driving lines. The old-time skinners claim that a larger, more emphatic vocabulary is also an asset, if not an essential.

The horse should be accustomed to working single as well as double, for teams are seldom needed on the small logs or poles. Moreover, the skid trails are usually just wide enough for one horse. On one occasion, a farmer tried to work both of his plow horses on a thinning job. For years they had worked as a team hitched to the wagon or the plow, so when in the woods, they still wanted to be together rather than work independently.

The horse must be trained to lay up in the collar under heavy loads, but not to lunge, jump, and go wild when a log hangs up on a root or windfall. Skidding should usually be downhill and for short distances —seldom more than 300 or 400 feet from the cold deck or landing.

A good horse deserves good care. He should be well fed, properly shod and refitted frequently, stabled somewhere near the job, and carefully treated for any injuries he may re-

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A skilled teamster with a good horse can skid small logs and poles through dense young stands with hardly any damage to reserve trees

ADIRONDACK Sky Pilot

HOW a wilderness parish in the pines in New York State's Adirondack Mountains has helped give life more meaning to Northeast area lumberjacks, is a saga of service that could be emulated to the benefit of many of the 256,000 loggers elsewhere in the nation. The largest forest pastorate in the East, the Lumbercamp Parish of the Presbyterian Church covers an area approximately 125 miles square. Its "sky pilot," the Rev. Frank Reed, ministers to the spiritual needs of over 1000 loggers working in several hundred camps.

Hub of this sylvan pastorate is a unique Woodmen's Club at Old Forge, New York. A converted school house, it has spacious living quarters on the first floor and rows of double decker bunks upstairs. A lively place on 'most any Saturday night, in holiday seasons it becomes a beacon in the wilderness to loggers looking for someplace to go.

Even at a distance, the place is a tumult of sound. The lilt of laughter, fiddle music and the rhythmic stamping of logger boots is a friendly invitation to the passerby. Inside, with a square dance going full blast, the light bulbs jump like apples in a bobbing contest as woodsmen swing their half-breathless partners much the way they twirl an ax. There is fun for all. The fiddler has a rubber elbow, the sideboard is heaped high with all manner of delicacies, and there's a fragrant aroma of coffee a-making.

Rev. Reed, a tall, slightly-stooped figure with iron-gray hair, is seen standing near the roaring fireplace, the center of a little knot of loggers listening to his description of the club's activities—how it provides a wholesome place where loggers can

Rev. Reed addresses a group of lumbermen at the Clarence A. Strife Camp at Little Moose Lake in the New York State's Central Adirondack region

Photo by Dante Tranquille

Religion, conservation and recreation are closely linked in the opinion of Rev. Frank Reed, a lumbercamp "sky pilot" who patrols a vast 125-square-mile parish

hang their hats when they come to town; is setting up a lumberjack pension plan; provides accommodations for loggers when they retire; and has purchased three cemetery plots where woodsmen can be buried in style when they get through.

This makes good talk to these men of the woods as they smoke a final pipe or two before re-joining the party. But it wasn't always the case. Thirty years ago, when the Board of Home Missions of the Presbyterian Church resolved to help Northeast loggers, there were those who said it couldn't be done. Loggers weren't like other people, these doubters said. The Board, never noted for a tendency to sidestep tough assignments, agreed it would be rugged but expressed the conviction that loggers, basically lonely men who had no place to go, would respond to true friendship.

In the late Aaron W. Maddox, a Brooklyn pastor who went to the Adirondacks for his health and remained there all his life, the Board already had one good man working in the woods. It needed another, preferably someone cut in the same mold as the Apostle Paul, perhaps the first "sky pilot" in history. In a word, the Board wanted a man's man.

They found such a man in the Rev. C. W. Mason, a tall, sinewy individual who had played a slashing guard on his college football team, was an outstanding woodsman, and who admitted to feeling somewhat penned in a small community pastorate.

The Rev. Mason plowed into his new assignment with the gusto of a man seeking release from too many covered dish suppers. He had thousands of loggers to minister to in hundreds of camps, most of them snowed in all winter. To reach them he spent his entire first winter in the woods.

To reach his parishioners, Rev. Mason slept out in sub zero weather that first winter, walked and snowshoed over 1000 miles—often following a compass bearing when trail blazings were obliterated by five feet of snow—and lugged a 50-pound pack that included: one water proof sheet (he never carried blankets but depended on a wood fire for warmth); enough rations for a week, mostly native grain and chocolate; an ax; razor and soap; extra socks; a small lantern and Testaments in 20 different languages.

It wasn't easy but he gradually won the loggers' respect. When he saw the need for it, he taught himself how to sharpen razors, knives and saws. When loggers expressed a partiality for Sears Roebuck catalogues as preferred reading matter, Rev. Mason toted them into them, one and two at a time. A physician friend, Dr. Frank Bigeral, "coached" him in remedies for simple illnesses and in first aid. He helped porter more than one injured logger out of the woods in winter, stopping every now and then to heat hot sticks to place under the injured man's blankets.

He could cut wood with the best of them and arose at 2 a.m. on many a frosty morning to help road monkeys cinder icy tote roads so the teams could get through. In that era of dozens of annual river drives Rev. Mason helped the rivermen with their dangerous work despite their early efforts to maneuver him on to a spinning log to see "His Reverance get dunked."

Gradually, the word got around that the "sky pilot" was a good man in a pinch. More and more loggers started attending his camp services which invariably followed an ironclad pattern. In summer, these services were held under the trees Rev. Mason referred to as "His Temple." In winter, the bunkhouse was the church and an upturned barrel covered by a horse blanket served as the pulpit. With the men on the deacon seats and double-decker bunks and rows of wet socks hanging on lines, Rev. Mason first gave the men news of other camps with emphasis on current cooks and Top kicks. Next came news of the world and in World War I Rev. Mason carried an operations map showing troop dispositions. The end of the war was one of the biggest items of news he carried to the camps, second in lumberjack newsworthiness only to the outcome of the Dempsey-Firpo fight. Finally, came the sermon and it was short and terse. Not a flowery man, Mason was against sin and he was blunt about it. Sin to him included immoderate use of alcohol and taking the Lord's name in vain—subjects with which many of the woodsmen had a certain familiarity.

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Tennessee Conservation Department photos

Scattered cypress trees are eerie souvenirs of Reelfoot Lake's curiously-patterned past

Reelfoot— A Strange Spot

A weird primeval beauty all its own belongs to Reelfoot, the Tennessee lake created by an earthquake that even reversed Ol' Man River's course

By SIDNEY SNOOK

"HERE," one reflects, "is something that just can't be." But there it is: Reelfoot Lake, one of the strangest bodies of water in the world, where boatmen drift over a fallen forest and weave their craft among the old trees that lift skeleton arms from the water. They are mere ghosts of trees, eerie souvenirs of a curiously patterned past.

Travelers going south on U. S. Highway 51 arrive at the little Tennessee town of Troy and from that point follow State Highway 21 westward for 21 miles to Tiptonville, Tennessee, and Reelfoot Lake. It is accessible on hard surface roads from all directions, only a few hours' drive from St. Louis or Nashville or Memphis. The traveler's sideline trip to Reelfoot will be well rewarded.

Reelfoot Lake is not just an ordinary lake; it is an earthquake lake, and it appeared suddenly. The word "appeared" is used advisedly. There was no lake to be seen in the flat Mississippi River bottomland. There was a forest. Then came the New Madrid earthquake of 1811-12 when the earth trembled, the banks of the river crumbled like cake, and the current of the mighty Mississippi flowed upstream for several hours.

Beginning December 16, 1811, and recurring over a period of months, the NewMadrid vibrations, so called because the town of New Madrid, a Spanish trading post on the Mississippi, was the principal settlement in the territory which bore the brunt of the disaster, rocked the central Mississippi Valley region. The first shock, accompanied by impenetrable darkness and fearful noise, brought terror and destruction in its wake. A low rumbling, as of thunder far off, preceded the shock.

With a roar Old Man River reversed his course. Islands disappeared; new ones came into view. Flatboats, moving downstream to market at New Orleans with their cargoes of corn and flour and whiskey, of grain and pork and drygoods, were wrecked on shoals that loomed suddenly before frightened boatmen. Nature was in a wild mood.

By an odd twist of fate, right into the midst of all the turmoil moved the first steamboat ever to navigate the Ohio and Mississippi Rivers. It was anything but a calm maiden voyage. Even in favorable circumstances this initial journey of the "New Orleans," built and owned by Captain Nicholas Roosevelt and a group of associates, would have been

a notable venture, but the conditions she met and conquered made her achievement little short of miraculous.

While geologists say that Reelfoot, the best example of a sunk land lake in the United States, was formed by depression of the region and inundation of water following violent earth vibrations, the legendary tale of the Indian tribes is a different story. The Chickasaws and the Choctaws of the "Indian country" had their own version of how the lake was born. It is the love story of Kalopin, whose name in the tribal language meant Reelfoot.

Kalopin was chief of the Chickasaws by right of heritage and skill, but he had the handicap of a deformed foot and walked with a slow, reeling motion. Because of this infirmity he found little favor among the maidens of the tribe.

When the time came for the young chief to take a bride, he dreamed of Laughing Eyes, daughter of the rich and powerful Chief Copiah, of the

A white egret glides over lake in the "cranetown" sanctuary

Choctaws. He vowed to woo and win her. But his plea of love fell on deaf ears. Old Chief Copiah told him bluntly that his dreams were vain; that the Choctaw tribal law prohibited marriage of a princess outside the tribe; and that, moreover, his daughter would not be permitted to marry a cripple.

Disappointed and rebellious, Kalopin resolved to use cunning and force where courtship had failed. So he stole the girl. Exultant, he decreed there should be feasting for days.

But in the midst of all the merrymaking in the Chickasaw camp there came a strange hush, unnatural and disturbing. Darkness descended swiftly. A roaring filled the air. The whole earth shuddered, and the ground on which the merrymakers danced, rose and fell in billows. It started to sink. Then the muddy waters of the river rushed in.

When the turmoil had ceased, waves lapped above the spot where only a short time before had stood a Chickasaw village. Kalopin and Laughing Eyes perished beneath the flood. Hence, the lake is Reelfoot.

Cypress trees and marshes border the lake which covers an area about 14 miles long and from one to five miles wide. From the water, shallow except for the submerged channels of old creeks and bayous, rise gaunt trees from which the branches have fallen away. Others lie prostrate just below the surface. Among the old cypress "knees," many of them charred by lightning or hunters' fires, are carpets of green "moss seed" and yoncopin lily pads; and lotus blossoms trace flowery patterns on the water in spring and early summer.

The reedy shoreline is a haven for birds, and white heron and blue crane wade in the cane brake. Little furry creatures of the woods run among the hills at the head of the lake where Davy Crockett once hunted bears.

The lake area, covering more than 14,000 acres, always referred to as the "sportsman's paradise," trite phrase that it is, affords excellent fresh-water fishing and hunting grounds. Saw grass in the shallows forms a natural fish hatchery, and the waters abound with game fish.

In the fall thousands of migratory waterfowl, ducks and geeze honking their winter way southward along the Mississippi bird lane, descend in a feathery cloud on the lake. The Mallards are the most numerous. Pintails and redheads and teal hide among the cypress stumps and in the rushes.

Fishing and hunting licenses may be obtained at several camps around the lake. Tennessee residents pay a one-dollar fishing license. Non-residents have a choice of a year's license for three dollars or a trip license for one dollar, good for seven consecutive days. A resident hunter's license costs two dollars, and non-residents are offered a year's license for fifteen dollars or a trip license for five dollars, good for five consecutive days.

The lake's reedy shores and its thick timber growth, with wild vines entwining the branches, form a haven for birds of many species. Ornithologists find it fascinating. Plant life is luxuriant. The lake and surrounding region are embraced in Tennessee's state system of parks with approximately 5000 acres maintained as a game preserve and recreational area.

A weird, primeval beauty all its own belongs to Reelfoot Lake. Its strange history and legend challenge the imagination.

Yoncopin lily pads dot water of the lake. The total lake area covers more than 14,000 acres and is a paradise for hunters and fishermen

INSURANCE LOANS

DIVIDENDS OF GOOD FOREST MANAGEMENT

By JAMES B. CRAIG

SOLID gains in management of privately-owned woodlands in the last decade are reflected in recent announcements by three major life insurance firms that they are entering the comparatively barren field of forest credit and making long-term loans on well-managed timber tracts. Mortgage loan men at the Traveler's Prudential and Equitable insurance companies have learned that "timber is a crop." Other firms, including Metropolitan and Mutual, are giving the matter study.

When one considers that only a few brief years ago forest land was lumped in the same general investment category as pastureland—some predicted it would be at least another decade before credit would be available—this new interest by mortgage loan men can only mean that forest management in the nation grows increasingly healthy. For years, timber tracts have been regarded as "unimproved real estate." Today, mortgage loan men are asking, "How can tracts, that produce a cash crop every few years and steadily improve in the process be regarded as 'unimproved'?"

What has created this change in viewpoint?

Interviews with some of the key farm loan and mortgage experts showed that three factors are responsible. They are: (1) that private enterprise has established a beachhead in timber management and gives assurance it will grow continuing crops of trees; (2) the fire hazard on protected lands is gradually being reduced due to the effort being exerted by federal, state and private agencies; (3) the number of professional foresters in the nation (13,500), especially those in the ranks of wood-using industries (4500), increases every year and gives promise that professional aid will be available in increasing quantity.

Here is what some of the top mortgage loan men in the nation have to say about timber tract loans as attractive investments:

Roger C. Wilkins, Traveler's—"We are interested in long-term investments and when woodland owners growing trees as a crop evinced interest in consolidating their indebtedness over long-term periods, we became interested. There is no question that ten and 20 year loans provide increased stimulus for sustained yield forestry operations. When we first entered the field we had no precedents to guide us but today the woodland loans business has gone beyond the trial and error

period and is here to stay. Ours is a multi-million dollar business already. We have either made or approved loans in Oregon, California, East Texas and in the Southeast. More are in the hopper."

George A. Fletcher, Traveler's (speaking of research his firm did in pioneering in a new field)—"We found that timber is a crop—a crop that can be nurtured, its yield increased under proper management. measured, and its present and future production known. We found not one crop but a diversification of products—all coming off the same acre . . . we found a profession of trained foresters accepting and meeting a challenge and confident in the future . . . in short we found an industry with a somewhat desultory past but with a promising and very bright future."

O. M. Krueger, Prudential—"An old industry is being transformed into an agricultural industry of respectability. It is difficult to understand why we Americans were so slow to realize that timber could be grown as a crop and at a profit. . . . For years we have made loans on farms which included modest to large acreages of timber land. The timber land was given a very low appraisal based primarily upon its capacity to carry livestock. Now that the industry is reaching a degree of maturity we have concluded that loans can be made on the basis of timber production. Our first loan was made a year ago December."

Eli Ferguson, Equitable—"In July we hired a full-time forester as an appraiser. He is going to be a busy man. We are convinced that our tree farm file of loans is going to grow but for the time being we will confine our operations to the South as our organization is not yet large and we are not yet prepared to process large numbers of applications."

Charles A. Stewart, Mutual—"We have not yet entered this field but we are watching developments with interest."

Qualification for timber loans has not yet fallen into any cut and dried pattern. One reason is the lack of guiding precedents. Another is that conditions vary in different regions—a situation that prompted Prudential and Equitable to confine their activities to the South, at least for the present. In general, conditions governing loan approval parallel those for tree farm certification. A management plan must show that the tract will grow continuing crops of trees for commercial purposes. There must be evidence of adequate protection against fire, over-grazing and insect pests.

In awarding its first loan, Prudential bore down heavily on both the fire control and management factors. Traveler's and Equitable are inclined to believe that the fire hazard on protected lands has been somewhat overemphasized in some cases. For instance, Equitable found that over-grazing, not fire, constituted the number one hazard in one case in the South where young trees were

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Well-managed tracts like this shortleaf pine stand convinced mortgage men that today timber is a crop
Photos by Louisiana Forestry Commission

Training young people to appreciate good forest is helping to set a sound pattern for the futu
Photo by S. L. Fr

Meet Douglas McKay—New Secretary of Interior

(*From page 9*)

in matters economic. Of course, there are many federal agencies in Oregon. Yet it is generally assumed that their activities are directed by orders from Washington and so are little affected by state or even regional considerations. The idea that a local boy might be sought out to head up such an agency and issue the orders, presumably with some regard for local conditions in state and region, is perfectly reasonable but none the less novel and exciting. The governor has received 10,000 letters and telegrams since his appointment.

There is curiosity regarding the nature of the big task to which Douglas McKay is being called. The Interior Department, established in 1849 and sixth in priority in the Cabinet, is in fact a tremendous enterprise employing 65,000 people and administering the use or expenditure of half a billion dollars each year. It is interesting to note, too, that the more considerate aver that "Interior is one of the three most efficiently run departments, the others being Treasury and Agriculture."

Time was when Interior's home office building was characterized by the irreverent as the "largest federally owned and operated dormitory in the Nation's Capital." In the 1920's, the structure was new and too big for its prime tenants, so that other federal units were housed in the top floors. Although the department's functions, even then, were remarkably diverse, the tempo at which they were carried on was unhurried alike in home office and the field.

A decade later came Messrs. Roosevelt and Ickes, to bring about so many new activities and such expansions of the old that the first building was wholly inadequate and another, larger structure was put up on the square to southward. Acts of Congress followed one another in rapid succession and executive orders filled the air. Of the jobs and powers thus created and conferred the "Old Curmudgeon" landed a considerable percentage for his department.

In 1939 a reorganization was effected, and for a time thereafter the department consisted of 15 or more bureaus and services.

There has been some later streamlining of functions and of operations in the field. A single Bureau of Land Management now carries on the work of the General Land Office, Grazing Service and the specially created Revested Oregon & California Grant Lands Administration. Most of the older bureaus, such as the fact-finding agencies, the Park Service and Indian Service have come in for sharpening of objectives and efficiency.

It is common knowledge that there are in the 15 western states many millions of acres of land needing only water to make them productive of farm crops. Fifty years ago Congress enacted legislation to bring about such marriages of moisture and soil. Today no less than a million people dwell upon lands reclaimed by irrigation or drainage. During the past two decades, under an aggressive Bureau of Reclamation the work has attained immense scope.

Erection of dams at Bonneville and Grand Coulee and construction of a vast transmission grid throughout the Pacific Northwest brought about creation of a Bonneville Power Administration, domiciled at Portland, Oregon to sell at wholesale the energy produced by federal generating facilities. This interdependence of private and public power producers and distributors is a highly significant factor in the phenomenal development of industry in the region. By Act of Congress the Secretary of the Interior chooses the man to head this agency and in effect guides its policies.

Inevitably, with so many departments, administrations and commissions engaged in working out New Deal programs, jealousies and conflicts arose. Some old feuds were continued and new ones developed. Such questions as whether federal forests should be administered by Interior or Agriculture, or whether power dams should be built by the Army or Interior Department are classic. Presumably, since the incoming President is a military man long accustomed to command, there will be a greater measure of harmony in the staff than heretofore.

Oregon, the Pacific Northwest and the United States are, in the opinion of Douglas McKay, confronted by the same problem, that of sustaining greatly increased populations by full development of natural resources. The first and essential step in such progress is careful planning. In such planning use should be made of many minds and all legitimately interested agencies. Joint federal and state action in the development and use of natural resources is a natural outgrowth of the manner in which the so-called "land grant states" came into being, and the latter have a continuing stake in public lands and in such assets as water, power and wood.

In the matter of power production and irrigation along the Columbia and elsewhere Douglas McKay believes firmly in the wisdom of building multiple purpose dams. He is not opposed to public power development so long as there is no freezing out of private utility enterprises, since the two react healthily upon each other and together sustain private industry. He understands the need for additional tillage land in the western states and so presumably would be friendly toward reclamation projects on a scale commensurate with reasonable national spending. He believes strongly in the fullest use of forest areas for timber growing.

From the time of Doctor John McLoughlin there have always been in Oregon many fine people of Scottish descent. Governor McKay is one of them, in fact his grandfather came to the Oregon country in the 1840's to work for the Hudson's Bay Company. The grandson was born in Portland 59 years ago and grew up at a time when economic conditions were rugged in the Pacific Northwest. He went to school when he could, did various jobs to help the family income, but eventually managed to work his way through the Oregon Agricultural College at Corvallis. In 1920, after serving as an Army lieutenant in World War I, he got a job selling automobiles and in that field found a successful business career.

Elected Mayor of Salem in 1932 and State Senator in 1934, he continued to keep a hand in local and state affairs. The second World War found him back in uniform as a major. In 1947 he decided to run for the unexpired term of the late Governor Earl Snell, killed with next in line of succession in a plane crash. He won and was re-elected in 1950 by a wide margin.

"Doug" McKay is a friendly man, devoted to wife and married daughters and five grandchildren.

Meet Ezra Taft Benson—New Secretary of Agriculture

(*From page* 8)

of the LDS church—who depend upon ever flowing canyon streams for their irrigation water. The simple fact that he is from a mountain rather than a plains state gives him a greater insight into conservation needs than most of the announced candidates for his position.

Mr. Benson himself cannot be separated from his church. He has been granted a leave of absence from his duties—not his position—to take over his Washington assignment.

Ezra Taft Benson was born Aug. 4, 1899, the eldest of 11 children, in his father's farmhouse near the little community of Whitney, Idaho. He was named after his great-grandfather who came to Utah in 1847 with Brigham Young and who also was a member of the Council of Twelve Apostles of the LDS church.

While never poor, his family was not rich. His 10 brothers and sisters were born in the same farmhouse and all did their share of chores at the farm, he recalls. "I could thin an acre of sugar beets a day—not an eight-hour day—but in our working day," he said when asked about his early farm work.

Staunch members of the LDS church, which emphasizes the importance of education, his mother and father never let farm chores cut into their sons' and daughters' school time. Young Benson attended rural public schools and received his high school education in Onieda Stake Academy, an LDS institution no longer in existence.

As is expected of all good LDS youths, he went on a mission for the church, spending three years in England beginning in 1921 before returning to Idaho to resume his education. Getting an education presented some formidable problems. Ezra was needed at the farm as were his other brothers. However, during winters when farm chores dropped off, he attended the Utah State Agricultural College.

Later, he and his brother bought the family's 80-acre irrigated farm when their father became a fieldman for a sugar beet company. The two Benson brothers alternated operating the farm and attending Brigham Young University, a church institution, and Ezra Taft graduated with a B. S. degree in 1926.

While at BYU, he won a scholarship to Iowa State College. He married Flora Smith Amussen, daughter of a pioneer Salt Lake jeweler, the day he left for the college in Ames, Iowa.

"I will never forget the day," he recalled in an interview. "We packed all our belongings on a model-T pickup truck. We lived at Ames on the $70 per month I got from the scholarship. Because I was a graduate student, we were allowed to use corn and squash grown at the college's experimental farm and we got along."

The couple returned to Idaho in 1927 after Mr. Benson had received his master's degree in agricultural economics. "I fully intended to spend the rest of my life as a farmer," he declared recently. But his training soon took him from the farm. He became county agricultural agent in 1929, helped organize the Idaho Farm Cooperative and later served as its secretary. He became executive secretary of the National Council of Farm Cooperatives in 1939, a position he held until 1944 when he resigned to take up his church duties.

That he is an apostle in his church indicates many things about the man's personal life. He has never used tobacco or liquor, tea or coffee. He has never been involved in any moral scandal. He has always given 10 per cent of his gross income to his church as tithe. He has always answered the "call" of the church regardless of personal sacrifice it may have entailed.

While Mr. Benson holds one of the highest offices his church affords, he is not a "clergyman" in the parish-garden sense of the word. Latter-day Saints (good church members never call themselves Mormons—a tag placed on them by their mid-western persecutors) do not believe in a professional clergy. Church members become priesthood members and a part of the clergy at the age of 12 when they are ordained deacons. LDS bishops who lead "wards" of several hundred members assume their spiritual duties in addition to their regular day-to-day occupations.

As an apostle of the LDS church, Mr. Benson's concern chiefly is with the spiritual well-being of its members. But the church since its earliest days has recognized a responsibility towards the economic well-being of its members. In this capacity, it has organized and still owns sugar refineries to utilize its farmers' beet crops, banks to protect members' savings, and many other money-making enterprises. As an apostle, Mr. Benson has had the duty not only to look over the spiritual well-being of church members but to see to their material wants.

As a church leader, he also has been active in the Boy Scout program and is a member of five national Scout committees.

Mr. and Mrs. Benson live in a modest home in a tree-lined residential street in Salt Lake City, where Mrs. Benson has never employed full-time help. They have six children: Reed, 24, a chaplain in the U. S. Air Force; Mark, 23, a scholarship graduate student at Stanford University; Barbara, vice-president of the freshman class at University of Utah; Beverly, 14; Bonnie, 12 and Flora Beth, 8, all attending public schools in Salt Lake City.

The Taft in the new secretary's name comes from his great-great-grandmother, Chloe, who was a sister of Sen. Robert A. Taft's great-great-grandfather.

Sherman Adams

(*From page* 9)

big say in how the country is run for the next four years. Active in lumber and logging industries of New England for more than 20 years before entering the political field, Governor Adams long has been a member of the professional Society of American Foresters. He played an important role in helping frame and pass New Hampshire's timber tax law, regarded in many circles as a model for other states to follow. He was a principal speaker at The American Forestry Association's 75th anniversary meeting held in Jefferson, New Hampshire in 1951. Governor Adams served as a member of AFA's Board of Directors in 1951 and as an honorary vice-president in 1952.

The governor also has served with a number of other forestry and conservation associations—as a director of the Northeastern Lumber Manufacturers Association, as a member of the Executive Committee of the Society for the Protection of New Hampshire Forests, as president of the White Mountains Region Association, and as a director of the New England Council.

. . . *Tree Growth*

By R. R. FENSKA

PLANTS alone can assemble and organize the inorganic materials into living matter. The plant food elements brought up by the sap from the soil, plus the carbon dioxide gas absorbed by the leaves from the air are united by the green chlorophyll in the leaves into living tissue. It is the only way there is of really creating *new* life on this earth. Of course, sunlight supplies the power or energy for this miracle.

Scientists have taken all the elements known to exist in living organisms, such as carbon, nitrogen, phosphorous, etc., and placed them in various combinations and conditions in incubators in an attempt to produce life. However, without the "spark from above" they have always failed.

Only in the green foliage of trees and other plants is it possible to *create* new life from inorganic matter. If we can ever produce green chlorophyll in the laboratory from its elements we will have solved the "riddle of life."

While we may never solve the riddle of life we can, however, greatly influence tree growth. In the forest we have the optimum conditions and environment for normal tree development. There we find the forest floor with its natural mulch. Nothing is more beneficial for healthy and normal tree growth.

This mulch insulates the roots against excessive and sudden changes in temperature. It conserves the water in the soil so necessary to maintain the sap stream from the ground to the leaves in the crown of the tree. The distintegration of the mulch furnishes the mineral salts essential to maintain activity in the green foliage.

Now consider the case of the average shade tree. It is usually planted where a forest floor or mulch is not present or desirable, such as a lawn or along a highway. It is growing under the most difficult situations that we can think of.

Yet, we want shade to insulate us from the direct rays of the summer sun. This requires a normal crown of leaves and soil conditions to maintain the foliage.

Naturally, we begin with the roots and provide the soil in which they grow with the plant foot elements. This is usually done by punching holes into the ground and partially filling them with a tree food with an organic base. The organic material makes it possible for the soil bacteria and organisms to act on the tree food and make it available for the root hairs to absorb the food elements into the sap stream. Hence, water and plant food are the beginning of the process of tree growth.

Now if we keep diseases and insects out of the foliage so that the chlorophyll can function properly we are then giving the tree the necessary means for carrying on the miracle of life.

There are three places in a tree where growth takes place: 1) elongation of the end bud of a twig, 2) elongation of the end of a root, and 3) division of the cambium cells between the bark and the wood. The first makes the branches of a tree reach out from the trunk of the tree and, also, accounts for growth in height; the second extends the root system in the ground as far as the branches overhead; and the third accounts for the increase in diameter of the twigs, roots and trunk of the tree.

One of the mysteries of tree growth which still puzzles scientists is how the sap reaches the top of a 300-foot-tall Redwood tree. Neither root pressure (osmosis), capillary attraction in the sapwood, or the force of a vacuum in the water conducting tissues will account for the rise of several tons of water to the crown of a giant Redwood tree every day. There is still some force not yet known that draws the sapstream up the stem into the leaves.

The ten following rules should be observed if we are to expect normal tree growth in our shade trees.

(1) Never plant trees too close to buildings, sidewalks, driveways, etc.

(2) Don't plant trees too deeply in the ground. The roots should be put the same distance in the ground as they were in their original location.

(3) Remember trees need water. Keep the soil moist but not soggy.

(4) Spray the trees at the right time, with the right solution, to keep insects and diseases from destroying the foliage.

(5) A balanced tree food should be applied when necessary. Use one with an organic base. Don't over feed.

(6) If you move a tree remember there is no better time than spring to do so. Certain trees may be transplanted in September or October if it is impossible to do so in the spring.

(7) Don't forget to prune back the tops of deciduous trees to correspond to the amount of root system removed when transplanted.

(8) Determine what trees will tolerate shade (i.e. Hemlocks) and those which need full sunlight (i.e. Junipers).

(9) If possible keep a mulch around the base to insulate roots against "freezing to death," or drying out in summer.

(10) Keep so-called "weed killers" away from areas where trees grow.

Your Woodland

(*From page* 23)

ceive. This means there will be some costs involved. The price of a good logging horse will run about $100 or more. Feed costs $2.00 to $3.00 a day, whether working or not. The cost of shoeing a work horse is about $10.00 (if you can find a qualified blacksmith).

Nowadays blacksmiths travel around the country just like a salesman. For instance, my neighbor Nels Jensen, who has handled horses for over 50 years, still operates a traveling horseshoeing service just as a sideline. He carries his portable forge, anvil, and other tools in the back end of his old Chevy. He often gets calls more than 50 miles away—quite a range for the village smithy.

Experienced horse loggers are almost as rare in this part of the country as the old-fashioned blacksmith. But a good skinner is just as important, if not more so, than a good horse. Incidentally, he too, should have more than a modicum of horse sense. By the old tradition he should also be tough as buckskin, chew Copenhagen, wear wide suspenders and stagged pants, sport a week's growth of beard, and have a built-in love for horse flesh—plus certain linguistic abilities. At least, these were the basic qualifications in the good old days. But for the modern teamster, the only requirement is the ability to handle horses in the woods.

Even with trained horses and first-rate teamsters, horse logging still poses its special problems. Like most other jobs in the woods, it is hard, he-man work. Some of these disadvantages are not always apparent to inexperienced operators.

In planning an early forest thinning with horses, there are many angles to consider. For one thing, feed costs become excessive when not working full time. Horses are almost human; they can not be treated like a machine. They are tough, rugged, and powerful, but there is a limit to the heat, work, and abuse they can stand. Although many horses are highly intelligent, it is rather difficult to educate them to such modern ideas as union labor, strikes, the 40-hour week, etc.

But in spite of his limitations, the horse has a definite place in the closer utilization, early thinning, and scientific management that are becoming a part of modern forestry in the West.

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1-53

Insurance Loans—Dividends of Good Forest Management

(*From page* 29)

involved. These differing conditions quickly convinced Equitable that the services of a full-time forester was a necessity.

Once applicants win loan approval every effort is being made to give owners wide latitude in carrying on their forestry programs. Referring to Prudential's initial loan, Mr. Krueger said, "It is not our intention to tie down the owners with a lot of strings because we realize that considerable freedom of action is essential. In this case, it was estimated that the tract mortgaged to us had a new growth rate of six million board feet a year. The owner is permitted to harvest three million board feet annually and any additional quantity up to another three million feet by making a stipulated payment on the loan for each 1000 board feet harvested."

Several years will be required to determine just how great the demand for timber tract loans will be. In general, insurance people feel it will prove brisk once loan processes are tooled up to approximate those in use for farm loans. "Keen interest" is reported by one insurance firm that is underwriting a recently opened timber loan agency in the South. Another reports it may prove feasible to inaugurate a program whereby commercial banks would initiate loans that would be taken over by the insurance firm at a later date.

One obstacle is the fact that federal banks still regard forest land as "unimproved real estate" no matter how well it is managed. Bankers are working to have this condition changed. To date, three state banking associations have petitioned the Comptroller of the Currency asking that this matter be given careful study.

Most of the loans approved so far by insurance firms have been for ten and 20 year periods. Interest rates have averaged around five percent. No rock bottom amount for a loan has been set but in general loaning agencies indicate they prefer investments of not less than $25,000. Biggest reason motivating applications up to this time has been the desire of many owners to consolidate their indebtedness over long-term periods. Another has been the desire to buy more forest land. The owner of one intensively-managed 8500 acre tract of slash pine in the South was awarded a loan to make a down payment on a 35,000 acre stand of sawtimber. To date, loans have been approved for both operators and private owners. For example, a lawyer who operates a timber farm on the side received one loan.

What the prospects are for the little fellow—the farmer who owns 62 acres of timber as opposed to the man with 5000—remains to be seen. At least one insurance firm is making a study of investment possibilities in this field. One thing is certain. Due to increased interest of mortgage loan men in crop timber, farmers with well-managed woodlots will enjoy better opportunities to obtain attractive farm loans.

In discussing the overall forestry loan field with insurance executives in New York, Col. William B. Greeley recently said that in his opinion the small woodlot owning farmer would not be greatly interested in such loans. Farmers in the Northwest, for example, do their own forestry work in off-seasons, Col. Greeley said. Moreover, they all hate debt, he added.

With big reservoirs of private capital now beginning to open up for once-ignored woodland owners, there is increasing evidence that hard work in forestry is now paying off in tangible form. Certainly there is nothing static about the forestry pattern of education and action that is unfolding on privately-owned woodlands today. In industry alone, 4500 foresters today are selling good management to small landowners. Private foresters and those engaged in association work swells the total to approximately 5500. All told, there are 13,500 foresters at work in the nation including those in federal and state agencies and consultants.

These men are on the forestry firing line — a line that is being strengthened in depth due to custodians of private capital who now see forest lands as improved investment risks. No greater recognition could be achieved than this accolade from investors' money which raises the question does the forestry movement—in the light of this progress —require regulatory measures by federal agencies to get the job done? Does it need government loans to further accelerate the activity?

Armed with a few facts it is easy to be dogmatic and answer "yes" or "no" according to one's persuasion. No one questions today that forestry progress has been rapid in recent years. The question that has been raised in certain federal and lay circles is "has it been rapid enough" to provide for the nation's future forestry needs?

Eventually these questions will be resolved on their merits and the public will be the judge and jury. And in presenting what can be a strong case for private initiative it should be remembered that while solid forestry beachheads have been established the big campaign is yet to be waged. Dean Samuel T. Dana, of the University of Michigan, recently contributed a cogent statement regarding the status of private management today. In an article entitled "Private Forestry in Transition," Dean Dana said:

"Enthusiasm over recent progress should not, however, blind us to the fact that it is only a good beginning. Evolution, not revolution, is the order of the day. Neither the area of private forest land now under management nor the average quality of that management gives any assurance of a continuing supply of forest products adequate to meet the needs of a nation with a rapidly-expanding population, a desire for ever higher standards of living and a responsibility for world leadership. Current efforts by private owners must be intensified, extended and supplemented (not supplanted) by appropriate activities on the part of public agencies.

"Private forestry in the United States has come far in the last ten years. It has still farther to go. With full cooperation on the part of all concerned, there is reasonable hope of success in attaining the common objective of enabling our forest resources to play the part they can and should in promoting and maintaining the prosperity of the nation. Industry's present attitude arouses hope and confidence that the transition from negligible planned production, through substantial production, to full production on the 75 percent of our forest area in private hands will be faster than we dared hope. The prospect is one to encourage optimism but not complacency."

AFA'S FOREST CLINIC

Sprout Oak Decay

By ELMER R. ROTH

A LARGE percentage of the second-growth oak forests of the eastern, central, and southern United States is of sprout origin and is composed of sprout clumps rather than single stems. Oak sprouts usually originate in the region of the root collar or from the side of a stump from inconspicuous dormant or latent buds. In sprout development the old root system may or may not be entirely taken over by the new growth. The sprouting capacity of oak stumps is related to age, size, vigor, and species of the parent stumps. Forest products worth many millions of dollars are produced annually from sprout stands. Under proper management and fire protection these second-growth oak forests are becoming increasingly important.

Sprouts have certain advantages over seedlings in that they begin development within a year or two after a tree is cut, and they grow very rapidly for the first few years. Studies of oak sprouts in many Eastern and some Middle Western states showed that in one sprout of every four the normal decay of the parent stump spread into the sprout through the zone of attachment, causing extensive butt rot. In more than 60 percent of the cases this decay was caused by the fungus *Stereum gausapatum* Fr. Investigations revealed that sprouts that developed from buds high on the parent stump contracted stump rot readily, but those that came from buds at or below ground line usually remained sound. One method of insuring low-origin sprouts is to cut the stump at or near ground level.

(Reprints of this and subsequent *Forest Clinic* articles will be available in quantity upon request.)

Hosts—Sprouts of all species of oak important in the eastern United States are susceptible to rot from the parent stump. Indications are that species of the red oak group are more susceptible to such rot than species of the white oak group. *Stereum gausapatum* attacks all oak species and produces rot in one oak species about as readily as in another after it gains entrance to the heartwood of the sprout.

Symptoms—Sprout oak stands are characterized by multiple stems, swollen bases, and parent stump wounds, are likely to be decayed. High-sprout origin (fig. 1, *A, D*) is an indication of likelihood of decay. The presence of fungus fruiting bodies on the parent stumps is also an indication of decay. There is, however, no individual symptom that will definitely indicate whether a specific sprout is decayed.

Damage—Butt decay in sprout oak stands may vary from very little or none to more than 60 percent of the stems decayed, depending on the size of the parent stumps, previous history of the stand, height of sprout origin, and species involved. In studies on 45 sample plots an average of 25 percent of the trees

(*Turn to page* 43)

DECAY IN SPROUT OAKS

High origin sprout is likely to contact decay from parent stump. Low origin sprout sound

Stump cut very low. Sprouts from stumps which are cut like this should remain decay free

Extensive butt rot in black oak sprout, following the cutting of one of twins 11 years before

30-year-old scarlet oak sprout with decay from parent stump because of high attachment

The Conservation Association

(*From page* 17)

The American Forestry Association was a trail-blazer in the conservation movement, and for three-quarters of a century has been in the forefront of what Theodore Roosevelt aptly called "the fight for conservation."

Its magazine *American Forests* is one of the oldest conservation periodicals in continuous publication in the Western Hemisphere. And its membership comprises one of the most ardent bodies of citizens dedicated to natural resource preservation anywhere in the world.

Although it is not within the scope of this brief article to mention all the regional and state associations active in forestry, nevertheless it is relevant to point out how the early forest conservation movement developed locally as well as nationally. One of the oldest of its kind, the Minnesota Forestry Association was organized in 1876. In 1884 a group of Colorado pioneers sought to protect the forests of the state by organizing the Colorado State Forestry Association, now the Colorado Forestry and Horticulture Association.

In order to preserve the forests of the commonwealth, to disseminate information about them, and through forest protection to conserve water supplies and soil, the Pennsylvania Forestry Association was organized in 1886, and began issuing the magazine *Forest Leaves,* now published quarterly under the name *Pennsylvania Forests.* It is still one of the most active of the state associations.

Then in 1909 was formed the influential Western Forestry and Conservation Association, which in turn grew out of several Northwest pioneer cooperative fire patrol associations. Essentially a clearing house of information for all forest protective agencies—private, state and federal — its membership territory covers much of the West including British Columbia.

First Professional Society — Without seeking to assign undue credit to forestry for leadership in the conservation movement, the author believes that it is pertinent to emphasize that the first truly professional society — as contrasted to a citizens' association—to arise in the natural resource field was the Society of American Foresters. Organized in 1900 as a professional body of technically trained foresters, the Society has been active for a half-century in advancing the science, standards, and practice of forestry in America.

The *Journal of Forestry,* the Society's professional magazine, one of the foremost technical forestry periodicals in the world, is read monthly by more than 10,000 subscribers in America and abroad. Members practice under a professional code of ethics. An important activity of the Society is the accrediting of colleges and universities offering professional curriculums in forestry.

Although a privately endowed agency, the Charles Lathrop Pack Forestry Foundation, organized in 1930, has functioned much in the manner of a conservation association. It has fostered scholarships, participated in research work, contributed to educational projects both in America and abroad, and published a valuable series of books and bulletins dealing with forestry and resource management. Its companion organization, The American Tree Association, has also published much educational material about forest protection and extension.

Likewise not a citizens' association in the sense of those previously discussed, the industry sponsored American Forest Products Industries, Inc. — commonly known as AFPI — has devoted much talent and large sums to the promotion of public education in private forest management, especially in fire control. Operating since 1941, AFPI has distributed considerable attractive educational material to schools and the general public. It sponsors two projects now accorded wide acceptance and application — the Tree Farm system and the Keep Green movement.

In addition, the forest conservation programs of several national and regional trade associations representing special forest products groups are adding their weight to the total conservation effort. On the continental front, the National Lumber Manufacturers Association and the Forest Industries Council, to mention but two, have long been active.

Wildlife Orgnizations — Apparently the earliest national game association to come into existence was the Boone and Crockett Club organized in 1885 by a group of big game hunters. It was followed in 1895 by the New York Zoological Society.

To provide for an annual meeting and discussion of mutual problems of wildlife conservation by public officials of the several states and Canadian provinces, there was organized in 1902 the International Association of Game, Fish, and Conservation Commissioners. This well-known association recently rounded out 50 years of activity.

Another association that will soon complete a half-century of valuable service in the public interest is the National Audubon Society, organized in 1905. Aided by a loyal membership, this Society is able to maintain one of the largest headquarters and field staffs of any conservation organization in the world. It provides warden patrol services to wildlife sanctuaries, carries on wildlife research, conducts educational campaigns in schools, operates nature study camps, and publishes bulletins and periodicals including the attractive and informative *Audubon Magazine.*

A similar organization with a splendid record of promoting scientific knowledge of ornithology is the American Ornithologists' Union. It has long served as a forum for uniting the interests of scientists and laymen in this fascinating subject.

Several other wildlife associations were organized during the early years of the present century. Some of these have since merged with other bodies or have changed their names. Among those that are currently most active are the following.

The Izaak Walton League of America — "defender of soil, woods, waters and wildlife" — was founded in 1922. With a nation-wide membership and many local chapters, it is one of the nation's best known and most active citizens' groups for conservation. Its official publication, *Outdoor America,* is published bimonthly. Not simply a fishermen's organization, as is often erroneously assumed, the League is active in all fields of resource conservation. It has initiated extremely worthwhile movements in behalf of clean waters, and has vigorously campaigned against stream pollution.

A comparative newcomer in the field, the Wildlife Management Institute has rendered notable services to conservation, especially by holding a large annual meeting — the North American Wildlife Conference—at which, in numerous technical and general sessions, all aspects

of wildlife and related resource management are reported and discussed.

In addition, the Institute provides technical aid to cooperating agencies, issues research and scholarship grants, and sponsors books and other publications both scientific and popular. Its membership is composed of individuals, associations, and industries. Set up in 1935 as the American Wildlife Institute, the name was changed in 1946 to Wildlife Management Institute.

The Wildlife Society, instituted in 1936, is comprised mostly of members professionally engaged in the practice or teaching of wildlife management and research. Like the Society of American Foresters in its early years, the Wildlife Society, through advancement of high technical standards, is rapidly assuming for its practitioners the attributes of a true profession. The Society's *Journal of Wildlife Management,* issued quarterly, reports new techniques and the results of research. Well edited and printed, this journal ranks with other scientific and technical periodicals dealing with natural science.

Three additional technical societies in this field, though numerically small in membership, have done much to increase scientific knowledge. These are the American Society of Mammalogists, the American Society of Zoologists, and the American Society of Limnology and Oceanography.

Established in 1936, the National Wildlife Federation, as its name implies, is an organization of affiliated state conservation groups. It widely disseminates information and literature to its member organizations and the general public.

The Federation's news letters and bulletins about legislation are valuable in keeping the conservation-minded public up to date on the progress, as well as the threats, to conservation accomplishment. Through its artistic and popular wildlife stamps, issued annually, the Federation has delivered conservation messages to hundreds of thousands, children and adults alike.

In such a brief article the author is unable to give full credit to the activities of several other organizations that are rendering yeoman service to fish and wildlife conservation. But this account would be incomplete without mention of the Game Conservation Society, the National Fisheries Institute, the Sport Fishing Institute, and Better Fishing, Inc.

Parks and Wilderness—As specified by its name, the National Parks Association, organized in 1919, is dedicated primarily to upholding the standards of the national parks and monuments, and to disseminating accurate information about them. In addition, the Association works to promote a national recreational policy for public lands, to protect the flora and fauna of park and recreational areas, and to help preserve the scenic wilderness.

National Parks Magazine is the Association's official organ, published quarterly. It is one of the nation's most beautifully illustrated and printed periodicals. The Association also sponsors the publication of books and other educational material.

A companion organization with purposes similar to those of the National Parks Association is the Wilderness society, organized in 1935.

"You mean . . . ?"

Its objective is the preservation of the American wilderness and primeval environments, especially against commercial exploitation. Corollary interests of the Society include the preservation of wildlife species and their habitats and of natural areas, particularly on public lands.

The Society issues a quarterly publication, *The Living Wilderness,* as well as news bulletins and public policy statements on issues affecting its sphere of interest. A small but energetic society, it is a diligent worker in the conservation field.

In addition, the Ecological Society of America, founded in 1915, and the recently reorganized Nature Conservancy are contributing to scientific and public understanding of the problems, as well as the possible solutions, to the ecology and preservation of wild nature. It is unfortunate though perhaps inevitable, in view of the numerous other organizations active in general conservation, that these two associations are still numerically small in membership. Both organizations publish quarterly periodicals: the Ecological Society a bulletin, and Nature Conservancy a news report.

Soil and Water Conservation—With the upsurge of public interest in soil erosion control during the past two decades, several organizations have been established to promote better land and water conservation.

Friends of the Land is a citizens' association, organized in 1940. Concerned with the problems of soil and water conservation in relation to human nutrition and health, this group carries on programs of public education. *The Land,* the association's magazine, is an excellently edited and attractive quarterly. Also issued irregularly are so-called "Land Letters," news bulletins, and technical reports.

The Soil Conservation Society of America, organized in 1941, is composed largely of technicians and workers in this field. Its main purpose is to advance the science of soil and water conservation, and to provide information about new techniques and practices. Members of the Society are drawn from technical and professional specializations in both the physical and biological sciences. The Society publishes a quarterly *Journal of Soil and Water Conservation.*

Numerous other bodies concern themselves with this important work, primarily at the local and community level. On the national front the Association of Soil Conservation Districts is helping to provide effective coordination and cooperation among the mounting number of soil conservation districts.

Range and Grassland—Two national organizations are active in grasslands and range management. The Grassland Research Foundation, organized in 1950, has as its principal interest the establishment of representative natural grassland areas for preservation and research. It is currently promoting the creation of national grassland monuments.

A later but growing organization in this group is the American Society of Range Management. A scientific society, its objectives are the advancement of the practice of grazing, land management, and the conservation of forage and soil resources. The Society publishes a

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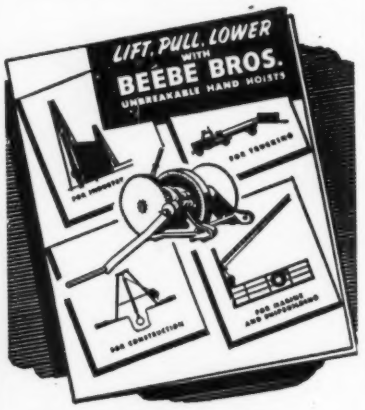

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technical journal to stimulate discussion and understanding of range and pasture management.

Nature Education—Supplementing the work of those conservation associations that engage in direct action on the legislative, administrative, and research fronts are several national and numerous local bodies that are concerned primarily with nature education. These organizations have been highly effective in developing public appreciation of nature and the need for protecting all natural resources.

One of the well-known organizations in this latter category is the American Nature Association, created in 1922. Directing its program largely to students of natural history, teachers, and others interested in popular natural science, this Association publishes the delightful *Nature Magazine* and special bulletins on conservation.

Other groups active in this area are the International Union for the Protection of Nature, the American Nature Study Society, the National Association of Biology Teachers, and the Wildflower Preservation Society. Although not an association in the same connotation as those aforementioned, the American Museum of Natural History has long been an important contributor to popular, as well as scientific, education.

General Conservation — In the book *American Conservation,* published by The American Forestry Association in 1935, Ovid Butler wrote, "The story of American conservation is the story of America—its land, its resources and its people." Several organizations are currently helping tell this story and pointing up its significance to our way of life.

Although not a membership organization, one of the most active of these is the Conservation Foundation of New York, founded in 1948, which has issued several significant books and reports on the status of renewable resources including soil and water and their relationship to vegetative cover. Its most recent report on forestry was distributed to the members of The American Forestry Association as a supplement to the December issue of *American Forests.* The Foundation conducts an active educational program and distributes films and recordings to schools.

In 1946 occurred the first successful attempt to bring together, for mutual service and the exchange of information about activities and objectives, the national organizations engaged in the conservation of renewable natural resources, including soil and water. In that year there was established the Natural Resources Council of America. Strictly a service agency for its 39 member organizations, it makes no attempt to control the policies and actions of member associations. Many of the national associations previously mentioned are members of the Council. In keeping with its function to advance sound management of natural resources in the public interest, in 1952 the Council proposed a national policy for renewable resources, a policy to which a number of member organizations have subscribed.

In this brief article it was not possible to do more than highlight the activities of those associations whose primary objectives are the conservation of renewable resources. Numerous other organizations with conservation as an activity, but not the major interest, are valiantly assisting in the good cause.

Among these organizations are the American Institute of Park Executives, the American Planning and Civic Association, the Boy Scouts of America, the General Federation of Women's Clubs, the Institute of Public Administration, and numerous others.

G.P. on Conservation—The need for conservation—and, inferentially, the reason why America today needs strong conservation associations—has been convincingly stated by one of the greatest conservationists of all time. Gifford Pinchot, in his book *Breaking New Ground,* sums it up thus:

"*E Pluribus Unum* is and always must be the basis in dealing with the natural resources. Many problems fuse into one great policy, just as many states fuse into one great Union. When the use of all the natural resources for the general good is seen to be a common policy with a common purpose, the chance for the wise use of each of them becomes infinitely greater than it had ever been before.

"The conservation of natural resources is the key to the future. It is the key to the safety and prosperity of the American people, and all the people of the world, for all time to come. The very existence of our nation, and of all the rest, depends on conserving the resources which are the foundations of its life. That is why Conservation is the greatest material question of all."

To this conservationists respond with a fervent "Amen."

New York's Waterfront Lumberjack

(*From page* 13)

life span of the average pier so there's a continuous dismantling process going on around the harbor.

Power estimates a potential 650,000 feet of big timber in the North River alone. That doesn't count endless piers that ring the whole New York waterfront including those on the other side of Manhattan and along the shores of Brooklyn, Staten Island and New Jersey.

Convinced that this wood was sound and in sufficient quantity to supply a sawmill, Power talked pier owners into letting him take their worn-out piling. He would save them expense by hauling it away. Land available on Caven Point, directly behind the Statue of Liberty on the Jersey shore, proved suitable for a mill and Power invested over $6000 in equipment and hired six loggers including Sherman Smalley, his sawyer, and John Anderson, the foreman.

As a lumbering operation, Power's job has its unusual aspects. Handling these big logs is a man-size job. Initially, the cable from a floating crane is lashed to the pile. A few tugs are usually ample to pull it out of the river muck. But sometimes they stick. When this happens they have to be sawed off at the base. A diver is lowered to the river bottom carrying an air-powered underwater power saw. About four feet long and weighing fifteen pounds, it is operated by pneumatic cylinders that pump two parallel blades back and forth.

When the crane lifts the pile, it is swung around and stacked on a waiting catamaran. This is a large raft made of heavy timbers lashed together. A strong rail along each side holds in the load. When it is loaded with 100 logs it sinks into the water with only a few inches of rails showing. Towed by a tug, it weaves its way across the harbor passing ferries, barges and ocean-going vessels.

As the cat nears the sawmill Power's loggers pole it in until it runs aground. The logs are pulled up on land by a winch. Once thoroughly dried out they are ready for the mill except for a once over lightly with mine detectors to ferret out any hidden spikes or other buried metal.

There's not much left of old pier piling except sawdust when the Burma Road Sawmill gets through with it. First, big framing timbers are cut. Softwood piling becomes boards. Hardwood makes truck body stakes. The mill also turns out pallets for warehouses and docks.

This is how Dick Power resurrected a lumber graveyard. Through his efforts, valuable wood that had been left to decay is now serving many useful purposes. As an example of 100 percent utilization, it would be difficult to match.

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Adirondack Sky Pilot

(*From page* 25)

An ardent conservationist long before the word had much popular meaning, Rev. Mason was a staunch admirer of "Teddy" Roosevelt and all his works. In making his long treks to the camps in those early days his constant chant was "harvesting, not hogging" of timber. When the St. Regis Paper Company launched its earliest tree planting operations, Rev. Mason became a prayerbook-toting version of a Johnny Appleseed so impressed was he by these plantings in the Blue Mountain and Santa Clara regions. Loggers still living well recall a series of sermons Rev. Mason preached on these planting measures in which he used a text from the Psalms—"He shall be like a tree planted by the water. . ."

When Rev. Mason retired after a span of 25 years of service there wasn't a logger in the woods who wouldn't fight the man who referred to him other than enthusiastically. He was their man. Hadn't he stuck by them during the great smallpox epidemic when everyone urged that he flee the camps? Hadn't he come to them in good times and bad on foot, burro, sled, horse and buggy and finally an old Henry auto? He had, and they loved him for it. In addition to his sterling personal qualities, he was admired as the outstanding Adirondack woodsman of the last half century, a man who snowshoed through Avalanche Pass years before a visiting Olympic skier was hailed by the press as the first man to perform such a feat. Today, at the age of 88, Mason still chuckles when he thinks of that.

When Frank Reed followed Mason and Maddox the ground work had been laid and laid well. Like Mason, Reed was a woodsman but he also saw the need to centralize the work somewhat more. A practical individual Reed quickly won the respect of the wood industries who helped him launch the *Lumber Camp News* (now the *Northeastern Logger*)—a monthly periodical that provides news of the camps, the world, notes on new equipment and its care, safety precautions and prominently features a logger's prayer and other religious notes in every issue.

The annual Woodsmen's Field Day at Tupper Lake with its feats of chopping and sawing prowess, hose pulling contests, floats and exhibitions of new woods equipment, was another Reed-inspired affair worked out in conjunction with the woods industries.

Proposing the Woodsmen's Club—a hub to help make loggers feel that they belonged—was Reed's next step. Would the wood industries help? They would and did.

The Adirondack Parish of the Presbyterian Church, and several others of a similar nature elsewhere in the nation, have played a leading role in the conservation of men as well as forest resources. This pioneering—an appeal that has always stressed the inner dignity of the man—has given loggers a new sense of "belonging."

Contrary to general belief, the lusty itinerant logger of early days is rapidly becoming extinct. He's still a mighty husky specimen but he's not the nomad he used to be. He's more of a home man and not infrequently has the wife and children living with him right on the job. Consequently loggers of today are saving more money and buying more defense bonds than ever before. And while other factors have also contributed to this trend toward domesticity, the pioneering work of the Presbyterian Church has contributed much in this evolution of an unusual breed of men.

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Abuses Under the Mining Laws

(*From page* 19)

cated and others that are pending, this 40-mile stretch of road may prove to be one of the costliest ever built.

Through the courtesy of Ray Harmon, assistant regional forester at Missoula, Montana, the writer last August was given an opportuity to make an on-the-ground study of this area. With us were F. K. Stewart, Mr. Harmon's assistant, and Walter Robb, ranger in charge of the Superior district of the Lolo National Forest.

An hour's arduous climb is necessary to reach the dividing line between Montana and Idaho. From this point one can see vast expanses of white pine, fir and larch on forest covered peaks in both the Lolo and Clearwater forests. In this two-state area is compressed 350 million board feet of standing timber ready for harvesting and which requires only the completion of a 40-mile road to get on with the job.

The Montana stretch of this road is now under construction and should be completed by the end of 1952. But it has been a tough battle. Stewart relates that three and a quarter miles of this stretch was held up for eight months by mining claims, the majority of which were unpatented.

This huge timber deal took four years in the making—time consumed in appraisals, timber cruises and surveying for the road. A private company has already started construction of a million-and-a-half dollar sawmill. The Northern Pacific has built a spur track and a power line has been erected tapping the lines of the Chicago, Milwaukee and St. Paul railroad, which is electrified through the region.

There is no way of accurately estimating how much it cost the federal government to settle the numerous mining claims in order to get the right-of-way for that 20-mile stretch of road through the Lolo National Forest. Not counting what the various mine claimants received, there is the time consumed in eight months of negotiations and legal sparring matches with lawyers, plus the cost of bringing some of the claimants into court.

Two facts stand out in connection with settling the rights-of-way across these mining claims. One is that not a single claim has ever produced minerals in commercial quantities. The other is that the U. S. Government had to pay for the privilege of building a road through lands of the United States—or to be exact—your property.

The Idaho stretch of 20 miles of road through the Clearwater National Forest hasn't been started yet. As a matter of fact, the route over the Bitterroot Mountains hasn't been laid out because, as of now, the Forest Service doesn't know how many mining claims it has to contend with nor the exact location of many of them.

One of the toughest parts of surveying a proposed Forest Service road is pinpointing the mining claims in its path. The mining laws state that claims must be filed at the county seat within the county where the discovery is made—not with the federal government. Such a situation leads to plenty of confusion.

The Idaho section of the road is not scheduled for completion until 1954. In the meantime, an aerial survey of the region has been made, and from the maps, a tentative route has been laid out. The exact route cannot be revealed for obvious reasons. Mining claims have a habit of springing up along the proposed right-of-way of any Forest Service road. Almost always nine out of ten of such claims have no connection with legitimate mining.

When the Idaho portion of the road is finished, the troubles of the Forest Service will not be over by any means. Certain tributary roads will be built, and the Service gloomily contemplates a fresh crop of questionable mining claims to contend with.

Being interested in the wildlife situation in connection with such a large timber operation, I inquired how the game population would be affected. Ranger Robb says that the sustained yield method of timber cutting almost always results in a rise in big game, which in the Lolo and Clearwater areas are mainly mule and white tailed deer and elk.

Commenting upon the difficulties of building that 40-mile stretch of road (which incidentally will be open to the public), Robb summed up the situation very neatly.

"I want the first board that comes out of the sawmill," he said. "It will be a three million dollar piece of wood."

He's right, at that.

AFA's Forest Clinic—Sprout Oak Decay

(*From page* 35)

were butt-rotted, and the average age of these trees was 35 years. The average height of decay in the individual decayed trees was about three feet.

Cause—Decay in sprout oaks is for the most part the result of heart-rot fungi invading the parent stump and continuing to rot the sprout when the stump rot reaches the area of sprout attachment. If the old stump is small it may rot quickly and the decay will become inactive before a heartwood connection is made between the stump and the sprout. If, however, the stump is large and a heartwood connection has been made between sprout and stump by the time the decay reaches the area of attachment, decay may continue into the heartwood of the sprout. Sprouts that originate at or below ground level are less likely to be decayed.

Another source of decay in sprout oaks, although not so common as that from the parent stumps, is that entering through wounds created as the result of removing one or more companion or twin sprouts.

Control—There are two types of stands to be considered in any control measures dealing with sprout oaks: (1) Young sprout stands, in which decay can be kept to a minimum by correct treatments early in the life of the stand; and (2) the older sprout stands, in which the ultimate decay can be somewhat reduced by proper cultural methods.

By reducing the number of sprouts when the stand is young (under 20 years old), leaving one low-origin sprout from each small stump, the future stand will be largely free of butt-rot and will be composed of single stems rather than sprout clumps. Select crop trees from seedlings, from seedling sprouts, or from sprouts arising from stumps four inches or less in diameter wherever possible. Favor sprouts from large stumps if they arise very low on the parent stumps and if the wounds left by the stumps rotting out are small. Oak sprouts that arise at or below ground level are rarely decayed, while those that arise two inches or more up on the stump commonly develop decay.

In stands where early treatments have been made, the crop trees will be largely single-stemmed. Where there has been no early treatment, pole stands of sprout origin are likely to be made up to sprout groups. If large companion sprouts are joined at the base with a V-shaped crotch, it is usually impossible to remove one without leaving a large wound at the base of the other, through which decay may enter directly from the heartwood of the cut stem into that of the remaining stem. Twins of this type should both be cut or both left. Where sprouts have a low U-shaped crotch between them, or are entirely separated from each other above ground, one or more can be removed without much risk of infection to the remaining stem.

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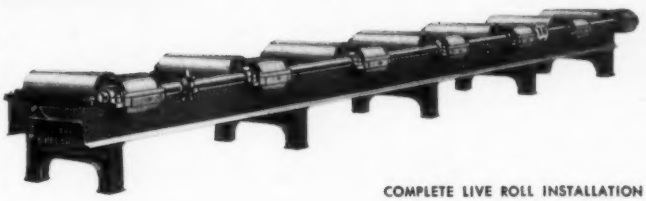

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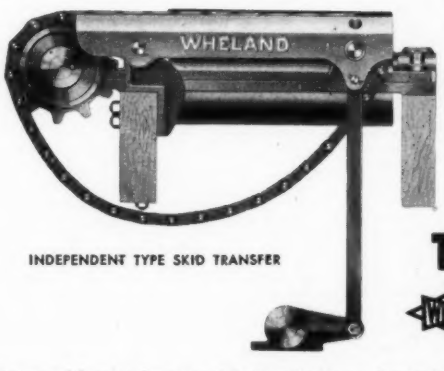

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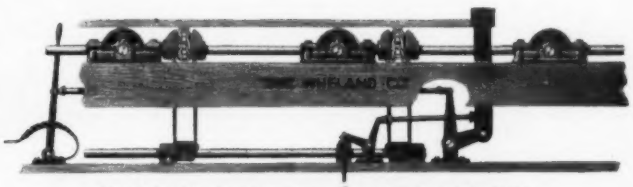

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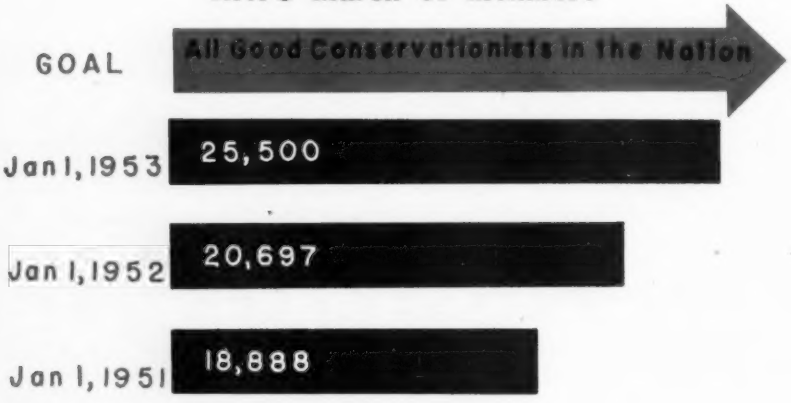

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The People in Pulp and Paper

(*From page* 12)

metropolis quite sufficient. Not uncommonly, an employee of a pulp or paper mill is one of a second or even third generation, if not in the mill itself, in the industry generally.

Nonetheless, the great growth of the industry and its isolation from the markets for its products, plus the casual unthinking acceptance of paper by all of us, has created one phenomenon of employee-management relationships which the industry is hoping to correct within its present program. The phenomenon is this: too many of the people who work in pulp and paper know very little about its importance to the general welfare and economy, hence about the importance of their own roles in society. Moreover, too many folks who make woodpulp or paper know very little about the many uses for it. Nor do enough of them realize what fine contributions the industry as a whole has made to improvement of streams or to conservation of wildlife and soils through intelligent forest management.

Two specific regions devoted to pulp and papermaking deserve credit for first facing these shortcomings and taking action on them. Their action is important because, in a sense, it became the core around which the whole renovated community relations program could build.

Several years ago the Wisconsin mills discovered, to their chagrin and consternation, that the citizens of the state knew almost nothing about vast sums of money and energy and thought expended by the industry on matters of general welfare. That led naturally to a full acceptance of the fact that the public knew little about the industry at all. The result was the "Information Service" of the Wisconsin Paper Industry, with headquarters at 712 Minzie Court, Menasha, Wisconsin.

However, for a good many years the big pulp and paper mills of the Far West had been practicing neighborliness in their respective communities on a more informal basis. Gradually a common denominator of relationships had appeared, if not an actual pattern, and so this pulp and paper region shares with Wisconsin the reputation of "pioneer" in modern community relations.

In 1951 the board of governors of the American Paper and Pulp Association, a natural clearing house for industry information and trends, decided that all mills should take renewed and refreshened interest in relationships within the community. They were impelled to that decision by request of the mills, particularly those which had been growing faster than average since the war.

To initially study the situation a committee was formed and it was appropriate that a Wisconsin mill man became chairman. This was Mr. Nat Bergstrom, president of the Bergstrom Paper Company of Neenah, a widely known pulp and paper community. And, significantly, among the most active members of the launching committee were such industry relations men as M. J. Schulenberg of Kimberly-Clark, also in Wisconsin, and William D. Welsh of Crown-Zellerbach on the west coast. But the cradle of the country's paper industry, New England, was by no means missing from the important formative plans because they occurred while George Olmsted, Jr., president of S. D. Warren Company of Boston and Maine, was president of the American Paper and Pulp Association. And the South was represented by such a prominent community relations proponent as Frank Heyward of Gaylord Container in Louisiana.

The choice for staff secretary of the newly formed committee was from a nomination by E. W. Tinker, once a top U.S. Forester and now executive-secretary of the Association. It was Donald M. Rochester, long a member of the Society of American Foresters and a former teacher whose whole experience stemmed from the "woods communities."

With our entry into World War II, the problem of pulpwood procurement became acute. Industry, State and Federal foresters joined for a solution to the problem, abetted by top military brass. Meanwhile Mr. Rochester had been brought to Washington to act as coproducer of a forestry film which still is widely exhibited. He was asked to find ways and means to use war prisoners in the U.S. woods, in accordance with international agreements, and to develop a program for their training as loggers in the pulpwood forests. Mr. Rochester accomplished both these orders with distinction.

A man of action, and built like one, the new secretary shortened a suggested survey period of two years to a little less than a year. Within that time he had called on more than 80 pulp and paper mills and their communities in all regions of the country. He felt that he had a good cross-section of the situation, and after reporting on this survey, as well as the results of a questionnaire survey, Mr. Rochester requested authority to get going.

What did he find in these surveys? Let the secretary tell it: "Most companies had been for a long time making every effort to become more and more an integral part of community life and vice versa. Emphasis on the many facets possible in a broad community program varied, of course, from mill to mill, and so did the degree of over-all effort in any given mill. But by and large, it was found that the larger the mill operation, the more intensive the effort, which is as it should be. The smaller the mill, the more day-to-day contact between mill and town—which is ideal."

It was therefore reasoned by the committee that the initial impact of the program ought to be centered on pulp and paper mills with 500 to a thousand employees, the so-called medium-sized mill. "Because," as Mr. Rochester says, "these are the mills which have grown so rapidly over the past few years that the initiative in community relations has not always kept pace."

The first efforts at coordination of the program were by choice very simple and effective moves. The industry was divided into its natural producing regions which primarily are the Northeast, the South, the Midwest, and the Far West. Where the size and conditions of the region required it, sub-divisions were created for the coordinating plan. Thus far, area organizations—simply for the purpose of regular meetings for exchange of information about community relations, or neighborliness—have been formed in northern and southern New England, New York, Ohio, Michigan, Wisconsin, and Washington-Oregon. More specifically and factually, that means that about 62 percent of the mills of the industry are formally in the program, and somewhat over 56 percent of all employees.

This month in Portland, Maine, will be held the first region-wide forum sponsored by the committee.

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and the subject will be "What is the foreman's role in community relations?" Plainly, everybody is going to have to get into the act. The only alternative will be to become a recluse or a hermit. But that's how it is in life, and this is life, too.

Next month the pulp and paper industry holds its big annual convention in New York — a fixture popularly known as "Paper Week" —and a feature will be a visual story of what some of the mills are doing in community relations. That display is bound to be a help to any executive who has a sneaking worry that his mill hasn't been quite as good a neighbor as it might be, with either employees or other citizens of the community.

But it won't tell the whole story or even a good part of the story. It won't be generally understood by the public, either, that the alternative to all this renewal of the pioneer spirit would have been easier, costlier, and far less effective. For, as many industries have done before and with varying degrees of success or failure, the woodpulp and paper mills could have decided on a vast "public relations program" which would undertake, via all the bright legerdemain of public relations, to put a message across, sell a bill of goods, give everybody the big picture—a little at a time.

But nobody was mad at pulp and paper. The industry had no message for the multitudes, and no big picture either. And all it wanted to sell was paper.

The problem, as the pulp and paper folks saw it, was to keep on getting along with people in its own neighborhoods. The same problem that you and I have, all the time, and we know it isn't always as easy as it sounds or looks.

The trick, of course, is that there is no trick. In trying to explain the whole business the other day, one mill man was reminded of the time his seven-year old daughter asked what a conscience is. "For a while I was stumped," he confessed. "Then I said it was sort of like a telephone. When it rings, somebody in the family is pretty sure to answer."

In those early settlements, snug in the forest clearings, there were no telephones. But conscience was there, then as now, and usually somebody answered. It hasn't changed a bit in the towns at the edge of our forests, and the pulp and paper people just want to make sure that it never does.

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Association Re-elects Johnston as President; Six Directors, 21 Vice-Presidents Named

Don P. Johnston, of Wake Forest, North Carolina, has been re-elected president of The American Forestry Association for 1953. Prior to assuming the presidency in January, 1952, Mr. Johnston was an active member of AFA's board of directors for five years. He is also a past president of the North Carolina Forestry Association.

Six directors were elected. Those named to serve three-year terms were:

P. R. Camp, of Franklin, Virginia, an official of the Camp Manufacturing Company, a director of the North Carolina Forestry Association and a former board member of AFA.

Leonard G. Carpenter, of Minneapolis, president of the McCloud Lumber Company and a director of the Timber Engineering Company, National Lumber Manufacturers Association and American Forest Products Industries.

Elwood L. Demmon, of Asheville, North Carolina, director of the Southeastern Forest Experiment Station and a vice president of the Society of American Foresters.

D. C. Everest, of Rothschild, Wisconsin, a past president of The American Forestry Association and board chairman of the Marathon Corporation.

Karl T. Frederick, New York City attorney and chairman of the board of the New York State Conservation Council.

James J. Storrow, of Boston, Massachusetts, was elected for a one-year term on the board. He is the treasurer of the Society for the Protection of New Hampshire Forests and active in the work of the New England Forestry Foundation.

Elected treasurer for one year was John M. Christie, vice president of the Riggs National Bank, Washington, D. C. Mr. Christie has served in this capacity since 1949.

Twenty-one honorary vice presidents were elected for one-year terms. They are: Ovid Butler, executive director emeritus, The American Forestry Association; E. J. Condon, director of public relations, Sears-Roebuck & Company; James G. Eddy, founder, Forest Genetics Research Foundation; Ross Farrens, Farrens Tree Surgeons, Inc.; Stanley G. Fontanna, Dean, School of Natural Resources, University of Michigan; George A. Garratt, Dean, School of Forestry, Yale University; Christopher M. Granger, U. S. Forest Service, retired; William B. Greeley, vice president, West Coast Lumbermen's Association; Clyde S. Martin, Weyerhaeuser Timber Company; Leslie A. Miller, former governor of Wyoming; Fred Morrell, U. S. Forest Service, retired; Joseph E. McCaffrey, International Paper Company; Henry T. McKnight, vice president, Forest Farmers Association Cooperative; John McSweeney, former member of Congress from Ohio.

Also: Randolph G. Pack, president, Charles Lathrop Pack Forestry Foundation; Lloyd E. Partain, farm market director, COUNTRY GENTLEMAN; X. L. Pellicer, vice president, The St. Augustine National Bank, Florida; W. S. Rosecrans, Chairman, California State Board of Forestry; A. R. Watzek, Roaring River Tree Farm, Oregon; William P. Wharton, president, National Parks Association; and Vertrees Young, executive vice president, Gaylord Container Corporation.

All officers were elected by letter ballot of the Association's membership. Tellers in charge of tabulating the votes were Herbert Appleton, Theodore Davis and Arthur Meyer, all of Washington, D. C.

New Member List

(*From page 45*)

A. E. Gaydos, Chester N. Godfrey, John L. Grumblatt, Catherine Harrison, Arnold Hoke, Vensel Holets, Charles Morris Johnson, William I. Jones, Jr., Marna Keay, Dr. Sustin Lamont, Nina A. Leonard, Richard H. Lindemer, Joseph P. Lynch, M. A. Mathiasen, Henry H. Meigs, G. C. Mullen, Mrs. Caroline Molthan Neilson, Eugene P. Pendergrass, M.D., Cornelia Boyce Pinchot, George W. Reily, J. D. Rohrer, Carl A. Schell, Mrs. K. G. Shelley, David Sherman, Carl C. Stainbrook, J. M. Steere, Paul F. Sterner, W. D. Tuck, E. H. Wannemacher, George W. Warwick, Weller Nurseries, C. L. Whittier, The Wiconisco Company, Marion B. Wood, Dr. S. Lawrence Woodhouse, Jr., Daniel M. Yoder, Jr.

RHODE ISLAND: James Dawes, Fred W. Hall, C. Hoogendoorn, Ralph B. Spencer.

SOUTH CAROLINA: D. L. Burroughs, Mrs. Robert S. Campbell, Ralph B. Heberling, Ben Long, Ninety Six High School of Ninety Six, David W. Robinson, Jr., Watson's Pecanwood Nurseries, R. H. Williams.

SOUTH DAKOTA: Custer Lumber Company, Ralph V. Hendrickson, Allen D. Kettering, Harry P. Kruse, Whitaker & Mattson, Mrs. Colin C. McKay, W. A. Swark, Alvin G. Wolf.

TENNESSEE: Charles F. Coleman, Mrs. W. E. Gresham, Tennessee Products & Chemical Corp., J. Ullmann, Miss Mary J. Vinson.

TEXAS: A. M. Allegret, Annie Beason, Alan Bruyere, Jerome M. Bryan, F. Cadena, Dan Danciger, Margaret K. Davis, Kenneth L. Dooley, Robert Eikel, William T. Falls, Hill's Nursery, J. S. Hudnall, Frank C. Imrie, Leland Glenn Marsters, Jr., Mary M. Morrow, A. E. Myers, R. Putman, Dr. Gertrude Blake Rich, J. H. Ross, R. P. Scripps, Robert O. Starke, Texas Nursery Company, C. T. Young.

UTAH: W. J. Greer, Jr.

VERMONT: W. Douglas Burden, William S. Dempsey, Dr. Grace H. Kent, Elizabeth Kundert, M.D.

VIRGINIA: Bernt Balchen, Mr. and Mrs. John H. Bross, D. Lawrence Glick, L. G. Hoge Company, R. N. Hoskins, Kenneth K. Kelley, Charles E. Kepley, John Ladd, J. W. Masters, Inc., Peveril Meigs, 3rd., Albert G. Sims, Mrs. David A. Smith, Mrs. J. H. Williams, Sr., Glen F. Vogel.

WASHINGTON: Mrs. Fred Altman, Mr. and Mrs. Thurlan Anderson, Ester Bolzarim, Mary E. Butler, Clark College Library of Vancouver, Jack Corbin, L. E. Crusoe, R. Louise Fitch, Graydon Gaudy, Kenneth L. Haysler, Arthur E. Hepburn, High School Library of Vancouver, G. E. Karlen, John R. Lathrop, Elma Public Schools, Teddie M. McPhetridge, William R. Meiners, John Mifflin, Arthur C. Moen, Henry Murray, Vera Pearce, E. Allen Robinson, Carl V. Sahlin, A. E. Schmidt, Prof. Myer R. Wolfe.

WEST VIRGINIA: Celia M. Cameron, Whitney R. Cross, Thomas J. Davis, Michael R. Prestera, E. Z. Ramsey, Glen W. Roberts, John Rukse, R. C. Tucker, George L. White.

WISCONSIN: Elston L. Belknap, M.D., A. A. Hoffman, Krahn Nursery, Mrs. Jerome R. Lauer, Manning Landscape Service, Nekoosa-Edwards Paper Company, Robert L. Patterson, M. A. Quader, A. A. Skemp, M.D., Max L. Willard, Jeanne L. Woodman, Henry A. Zander.

WYOMING: John Carey, Melvin G. Long, Jr., F. E. Morrison.

ALASKA: L. B. Avrit.

FOREIGN: Societe Royale Forestiere De Belgique of Belgium, Rolland C. Lorena of Guatemala City, Guatemala, Central America, Loucas Loucopoulos of Thessaloniki, Greece, Benjamin Moses of Tel Aviv, Israel, Prof. Juan Balme of Mexico City, Mexico, Dr. K. C. Wu of Taipei, Taiwan.

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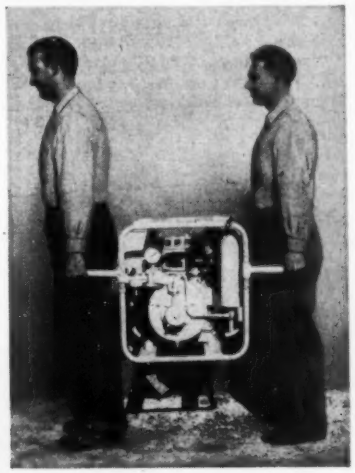
Below: An FZZ (or HPZZ) is invaluable in fighting this type of fire which burned over 3000 acres in Unity, New Hampshire. Photo courtesy of U. S. Forest Service.



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Norway (Red) Pine, 3-yr. transplants, (2-1), 3 to 5 in.	50.00
Norway (Red) Pine, 4-yr. transplants, (2-2), 5 to 8 in.	60.00
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White Pine, 3-yr. transplants, (2-1), 3 to 5 in.	45.00
Norway Spruce, 3-yr. transplants, (2-1), 2 to 5 in.	50.00
White Spruce, 3-yr. transplants, (2-1), 2 to 5 in.	45.00

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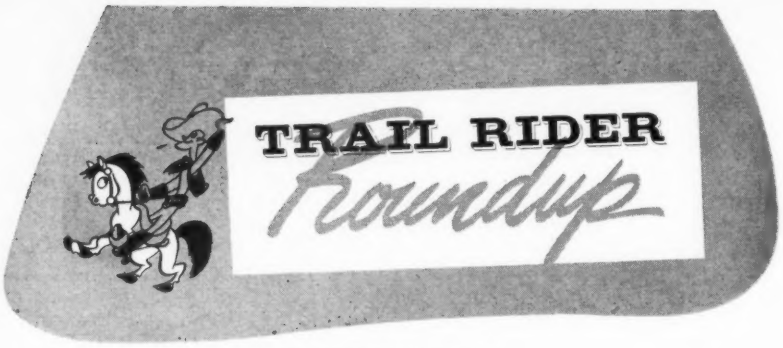

By DOROTHY DIXON
Director, Trail Riders of the Wilderness

The wilderness was brought right into the living room of a Haworth, New Jersey, home on November 15 and 16 when 20 Trail Riders from widely-divergent points descended on Clif, Meal and Lynn Parsells for a reunion. High points of the visit included a partial resume of 1953 pack trips now being planned and movies of last year's Maroon Bells-Snowmass expedition in Colorado's White River and Gunnison national forests.

Guests at the reunion were informed that The American Forestry Association last year made it possible for 331 individuals to vacation on horseback in remote wilderness regions of the nation's national forests. This was a peak year in Trail Rider annals. The pioneer expedition in the High Uintas Wilderness of Utah and the Glacier Peak-Lake Chelan trip in Washington were great successes as was the revived San Juan, Colorado ride. The regular trips also were given excellent reports.

The 1953 schedule of expeditions is now taking form but is not yet complete. Dates for a few have been established as follows: Flathead-Sun River, Montana, July 5-16 and July 16-27; Quetico-Superior, Minnesota (canoe), July 5-14 and July 18-27; Sawtooth, Idaho, July 21-31 and August 4-14; High Uintas, Utah, July 26-August 5 and August 6-16. Two trips in the San Juan, Colorado Wilderness are being planned for August. The entire program will be released early this year.

Guests who attended the Haworth, New Jersey, reunion included: George and Susie Finney, from Alexandria, Virginia; Harris and Jean Collingwood and Dorothy Dixon, from Washington, D. C.; Cynthia Gibson, Dave and Pat Munroe, Rose Tricarico, New York City; Ruth Sells, from Albany, New York; Virginia Flanagan, West Roxbury, Massachusetts; and Marion Burns, Teresa Mangin, Ellen Seaman, and Berkeley and Isabel Gordon drove from their respective homes in Moorestown, Paterson, Perth Amboy and Marlboro, New Jersey.

Joe Clark of Indianapolis was on his way with Ursula Voigtritter, of Chicago, and Galen Kauffman, from his studies at Ann Arbor, Michigan, but they had car trouble in Ohio and were unable to continue the trek. Long distance operators were kept busy putting calls through from Ohio, Indiana and Colorado as veteran Trail Riders and packers, including Pearl "Tommy" Thompson, boss of the annual Maroon Bells excursions, sent their best regards. Trail Rider Norman Gay, of Oakland, California, sent his recorded messages to various riders gathered at Haworth.

The Parsells entertained the group with a banquet spread in their recreation rom and a paper-maché trail horse, replete with feed bag, served as an attractive centerpiece.

The reunion terminated on Sunday with a dinner at the White Beeches Country Club in Haworth. The guests parted with firm resolves to conduct another reunion at the earliest possible moment and to revive past associations on wilderness trails during the forthcoming 1953 season.

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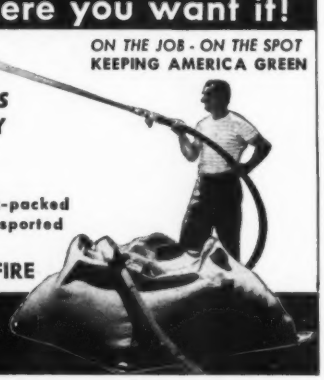
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Avalanche

(*From page* 15)

They also attack railroads, highways, phone and power lines and the lives of men who keep them running. Last year Wiese was called to Mt. Rose, near Alta, Utah, with Monte Atwater, nationally-known avalanche expert.

"We had to blast off nearly the whole mountain face to make it safe for work crews that were installing television, radio and telephone connections," Wiese recalls. The Forest Service receives many similar requests from private industries.

To control the mountain monsters —and there hasn't been a slide death since the Forest Service inaugurated the program—Wiese first predicts them by keeping a box score on five factors. These are: rate of snow fall; wind velocity; wind direction; settlement (determined by type of snow and temperature); and slope angle.

Any slope which rises at an angle of more than 25 degrees can be dangerous. At Austin Pass, many slopes ascend at angles of 50 degrees. When a snowfall rate of at least one inch per hour for a ten-hour period joins a wind velocity of 15 miles per hour, Wiese goes avalanche hunting.

The snow ranger practices his planned avalanche extermination after all people have been cleared from the slopes below the slide birthplace ("I like to break them on Sundays when there are plenty of skiers around to see—then I don't get so much argument when a slope is restricted because of hazardous conditions").

In preparing for a trek across a prospective slide, Wiese loosens his ski binding, takes off his Arlberg ankle straps and removes his ski pole slings from his hands. These preparations are taken so that if he is caught in the slide he will be able to shake off encumbrances and save himself by "swimming" on top of the snow.

He also fastens a long red cord to drag while skiing the snow down. If he is caught in the slide the rescuers merely follow the red cord, he hopes.

Then off he goes—and spectators generally hold their breath until he makes a safe crossing.

Avalanches aren't alike, Wiese says. They come in all sizes and three varieties, windslab, dry and wet.

Most menacing is the windslab type. A windslab is the soft snow

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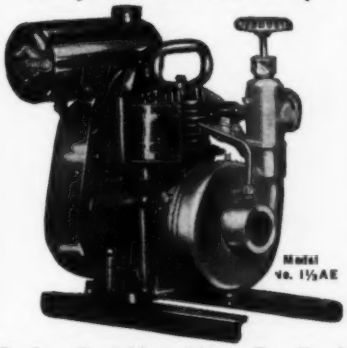

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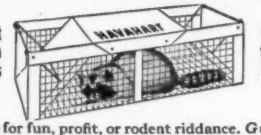

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crest formed on the lee side of a slope as the wind whips over the hillside. It does not bind to the snow base. It just hangs precariously, held by lateral tension.

The slightest pressure, thaw, or noise, will often break the cohesion —sending tons of snow hurdling downward. There is no escape from the path of a windslab avalanche. The release is sudden, violent and extensive.

The dry snow avalanche is accompanied by a destructive air blast. Extremely fast, it holds a double threat. If the skier survives the initial impact he may suffocate from "snow dust" as the light, feathery powder clogs his lungs.

The wet snow avalanche is the only variety which can be "out run." Heavier than the other types, it is comparatively slow-moving. It is the destroyer of property, flattening everything in its path.

Contrary to the general belief, snow avalanches do not thunder noisily down a slope. The ice avalanche crashes forward but the snow slide moves in a hissing mass—sometimes so silently that a skier is trapped before he hears it.

If a skier is buried by an avalanche, Wiese says there is hope of getting him out alive if rescue operations are organized promptly. Rescue operations are in three phases.

"First, we locate the general area of disappearance by means of pieces of clothing or equipment or by noting the point where the ski tracks enter the avalanche mass," Wiese says. "We know that a body has a tendency to lodge against obstructions."

The second phase sees rows of rescue workers probing the suspected area with 15-foot dull-ended aluminum poles. Contact with a body can be recognized because of the "rubbery feeling," Wiese says.

Records show that persons have survived as long as 72 hours in avalanches but such cases are rare. Ordinarily, victims are killed instantly or die within a short period from shock, exposure or suffocation.

There's little guesswork in this work of reading the minds of mountains. Just the same, when Wiese prepares to cut a new avalanche, he must experience some of the same sensations a matador feels just before his final test with a charging bull. Whether it's in Switzerland or the United States, the "White Death" is always a formidable foe. And each avalanche has its own little quirks.

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NEWEST RECRUIT TO THE FAMILY OF SMALL WATERSHED ASSOCIATIONS is the Connecticut River Watershed Council, Inc., in Massachusetts. The Council headed by Nathan Tufts, of Greenfield, will promote restoration and conservation of natural resources in a 13,000 square mile area. An initial project will be publication of a comprehensive compilation of data on the watershed area. Clayton M. Hoff, director of the Brandywine Valley Association, has been engaged as a consultant.

GOVERNOR DOUGLAS McKAY OF OREGON, who becomes Secretary of the Interior this month, will be a key speaker at the opening session of the Eighteenth North American Wildlife Conference that opens in Washington, D. C., on March 9. The largest meeting of its type in the nation, it is sponsored by the Wildlife Management Institute.

A HOUSE PUBLIC WORKS SUB-COMMITTEE in December urged Congress to end the "disgraceful conflict" between the Agriculture Department and the Army engineers by giving the engineers top authority over flood control planning. The committee said the work of the two agencies overlapped in many cases and frequently was at cross-purposes. The result, the committee said, "is higher costs for taxpayers." Representative Robert E. Jones, Jr., (D-Ala.) is head of the subcommittee.

HOW OAK WILT "JUMPS" CONSIDERABLE DISTANCES—anywhere from a few hundred miles to more than a mile—has been a baffling puzzle to pathologists. Now they may have the answer. Research in 1952 revealed that scattered patches of the oak wilt fungus often grow and sporulate under the loosening bark of standing oaks and cut logs. Insects found on many fungus mats may have been attracted by the characteristic fruity odor. This may mean that insects and birds are the carriers. It could also mean that infected logs when transported from state to state might be carriers.

LOBLOLLY PINES WILL PRODUCE A BUMPER CROP of cones next year in the coastal plain of Virginia and North Carolina according to a one-year forecast made by forestry agencies in the area. The forecast is based on a count of the small conelets which will make next year's crop and a comparison of this count with the number of large cones that matured last fall.

THE NATIONAL WILDLIFE FEDERATION HAS CALLED FOR A SPEED-UP of salmon studies in the Columbia River basin "lest feverish dam-building do irreparable damage to a great natural resource." Research by the U.S. Fish and Wildlife Service and by Pacific Coast states shows that salmon-management research has lagged far behind the construction program of federal dam-building agencies. The salmon runs of the Columbia are worth conservatively $20 million annually according to Carl D. Shoemaker, the Federation's conservation director. The fact that salmon runs have been maintained to date is due to sheer luck and to the ingenuity of biologists, he said.

(over)

"ARE WE THINKING BIG ENOUGH EITHER IN THE UNITED STATES OR CANADA of the need to preserve and replenish North American forests in terms of preserving certain tree species for their valuable uses?" That was the question raised by R. M. Fowler, president of the Canadian Pulp and Paper Association in a recent New York address. One answer, Mr. Fowler thinks, would be a joint survey of forest resources by Canada and the United States to improve conservation and use on a continental rather than a national basis.

RAPHAEL ZON, A FORMER EDITOR of the Journal of Forestry, was awarded the Gifford Pinchot medal for distinguished service to forestry at the joint meeting of Society of American Foresters and the Canadian Institute of Forestry in Montreal. The Sir William Schlich memorial medal was awarded posthumously to the late Ellwood Wilson, of Knowlton, Quebec, "the father of aerial forest mapping." Eight hundred foresters and their guests attended the meeting, largest international conference of its sort ever held in North America.

FORBES SCALE, AN INSECT PEST OF FRUIT TREES that has been on the increase in the Midwest since 1946, can be checked with the chemicals parathion, malathon or an insecticide containing parathion and methyl parathion used in early summer orchard pest sprays,according to entomologists of the U. S. Department of Agriculture.

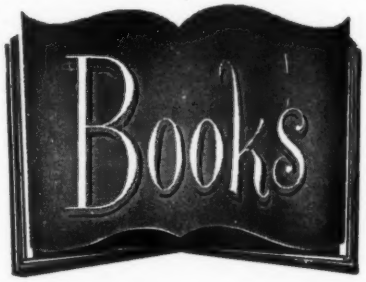
TIME, Inc., OF NEW YORK CITY, AND THE HOUSTON OIL COMPANY, of Texas,have set up the East Texas Pulp & Paper Company and will build a mill at Evadale, Texas. The plant will be located about 90 miles northeast of Houston and will be designed to produce bleached sulphate pulp and paperboard with capacity of 250 tons daily. A substantial part of the wood supply will be drawn from a wholly-owned subsidiary of Houston Oil. Construction will begin in the spring.

GENERAL RAINS IN EARLY AND MID-DECEMBER brought to a close in the Pacific Northwest one of the longest fall forest fire seasons on record, according to Kermit W. Linstedt, Forest Service regional fire chief. Despite the severity of the 1952 season, losses were relatively low on lands protected by the Forest Service in Oregon and Washington; 13,508 acres were burned in 1,582 fires. The previous year 62,756 acres went up in smoke as the result of only 814 fires.

PROCESS FOR WAX FROM BARK HAS BEEN OPTIONED by M. W. Kellogg Company of New Jersey from Oregon State College. Kellogg has eight months to test commercial feasibility. If okay, it gets five years exclusive; and the state of Oregon gets four percent of gross receipts.

ABSENTEE OWNERSHIP OF YOUNG TIMBER HAS ITS DRAWBACKS in the opinion of Lt. Harry E. Case, a citizen-soldier in Korea. Since being away, "timber pirates" have stripped his forest land on Whidbey Island, Washington of over $1,000 worth of growing trees, Lt. Case reports. His stand includes about 200 acres of young Douglasfir and hemlock. In addition to loss of young trees theft of evergreens used by florists has been so serious that brush pickers on Whidbey Island formed a protective association, Lt. Case said.

OHIOANS ARE TO BE ASKED TO PLANT AT LEAST 25 MILLION TREES in commemoration of the state's 150th birthday next year. Gov. Frank J. Lausche announced the plan at a recent meeting of the Ohio Sesquicentennial Commission. He urged that April be designated for the purpose and that every child and adult in the state be requested to help in the program. "I don't know of any finer way to celebrate the anniversary that to plant trees for future generations," Lausche said.



When ordering books—reviewed on this page *or* listed in The Bookshelf—remember that your AFA membership entitles you to a ten percent discount. Order through the Book Department, The American Forestry Association, 919 17th Street N.W., Washington 6, D. C.

Forestry and Its Career Opportunities, by Hardy L. Shirley. Published by McGraw-Hill Book Company, Inc., New York, N. Y. 492 pages, illus. Price $6.50.

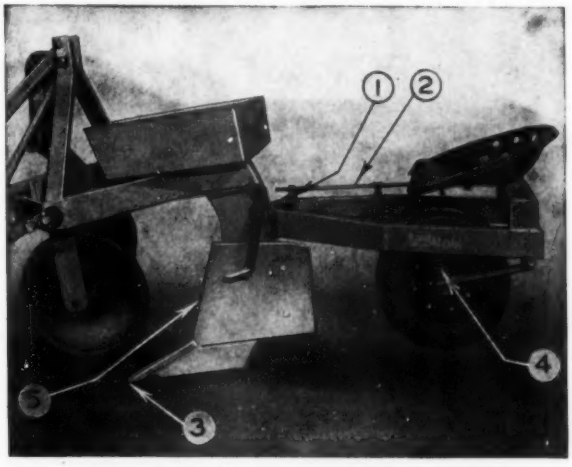
If some young man in your family has just announced his intention of becoming a forester, this is the book to give him. The chances are that you, as a member of The American Forestry Association, will also find reading it a rewarding experience.

As of 1951, the profession of forestry—now 52 years old in the United States—was still growing vigorously, Dean Shirley reports. Enrollment in forestry schools in 1950 totaled 6,536 and the peak graduating class numbered 2,321. In 1950, 13,000 foresters were employed in the nation. Today there are a thousand more foresters than there are chemical engineers but the young profession still has a long way to go before it rivals some 200,000 physicians and surgeons.

Dean Shirley describes both the rewards and the tribulations of forestry as a profession. Most satisfying of all is the fact that it is an important work, he says. Also, life in the open has much to recommend it. On the other hand, there are sometimes hardships to be endured.

"FORESTRY AND ITS CAREER OPPORTUNITIES" probably falls in the textbook category. However, it's an interesting one pointing out the career opportunities in a rapidly-growing profession. A good sequel for those who find this book of interest would be the author's article, *"Forest Policy for the Years Ahead"* in the May, 1952, issue of "THE ANNALS" published by The American Academy of Political and Social Science.

ROOTSPRED TREE PLANTER



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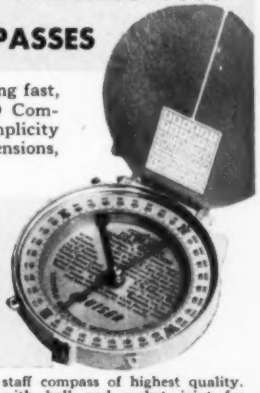

Timber cruisers and foresters select this precision made compass for its compact size and exclusive LEUPOLD features. Needle measures 2½", yet outside maximum diameter of case is only 3¼". Easy-to-read dial is graduated to single degrees and marked for both quadrant and azimuth readings. Coin operated external magnetic declination adjustment. Township plat. **$12.75**

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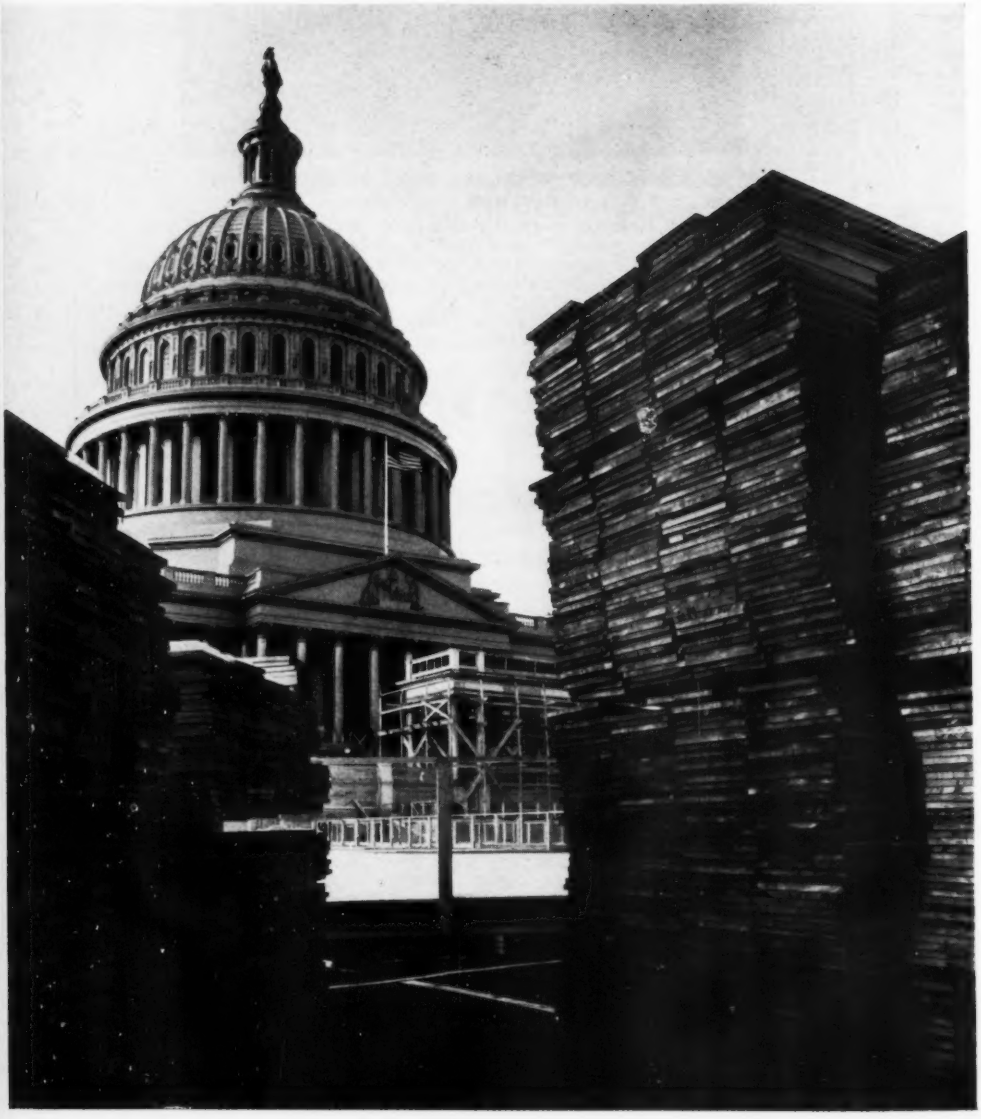
Feature Photo of the Month

In this issue AMERICAN FORESTS *is inaugurating a Feature Photo of the Month department. Photos used will be of unusual rather than esthetic or descriptive qualities and subject matter will be restricted to scenes, events, objects or persons related to the use, enjoyment or unique aspects of our renewable natural resources. For each picture selected* AMERICAN FORESTS *will pay* $10.



Nearly one million board feet of mixed sotfwood lumber is being used to build temporary stands, platforms and enclosures for the Jan. 20 inauguration of President-Elect Eisenhower. This unusual photo was taken by Jack Rottier as work started

Get Set to Spring into Action with INDIAN FIRE PUMPS

If you've been under the impression that INDIAN FIRE PUMPS were intended for use only on brush and grass fires you're in for a big surprise. Just read this letter from a user who once thought the same thing:

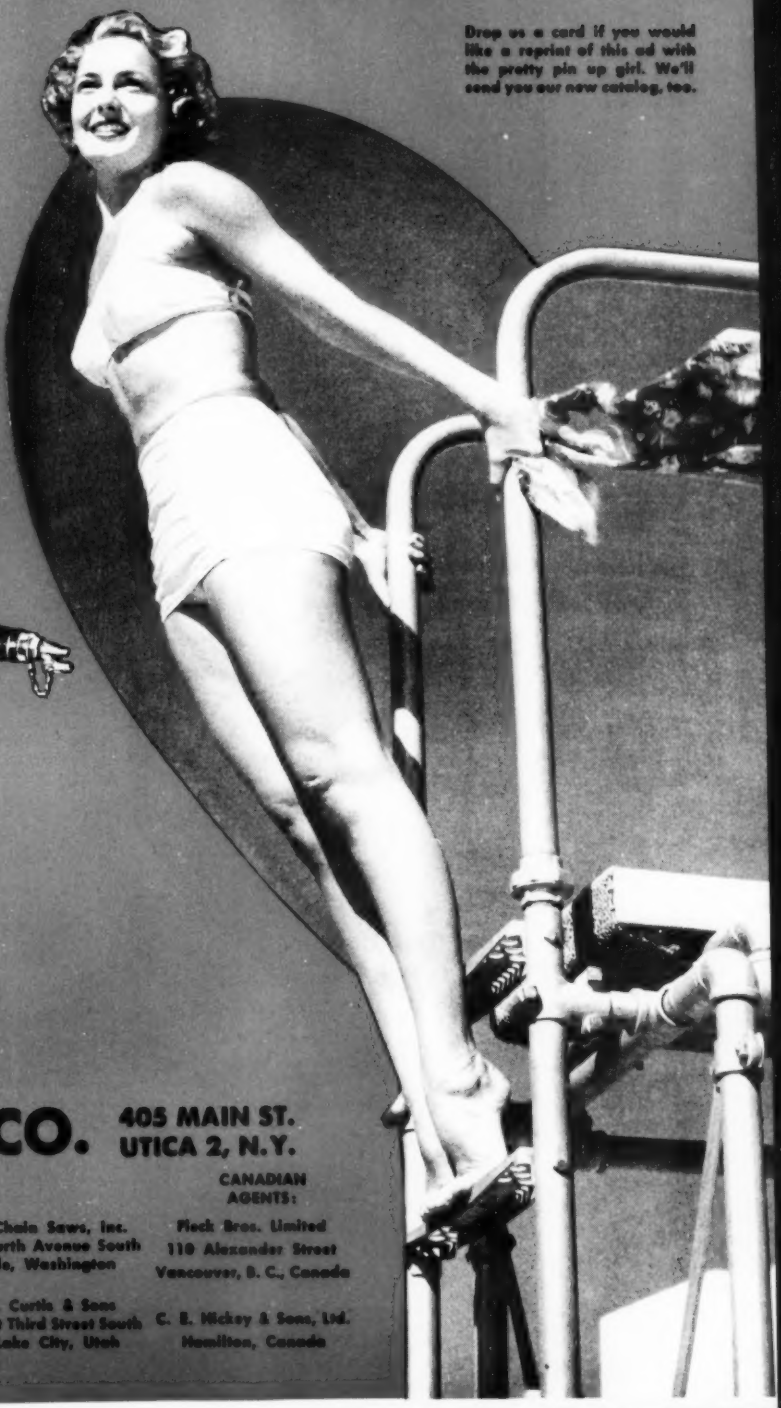
"I once thought INDIAN FIRE PUMPS had use only where a volunteer department was putting out grass fires. Since including a No. 90 galvanized INDIAN on our apparatus, however, I found that the men would not use any other type of extinguisher.

That led me to buy a number of No. 90 solid brass tank INDIAN FIRE PUMPS and place them on all our equipment. We are most enthusiastic about INDIANS and prefer them to any other hand extinguisher for all class A and small oil fires."

George P. Lasher, Fire Chief

We urge you to make the same test. Put in several INDIAN FIRE PUMPS now and try them out. Convince yourself of their many, many applications. And remember—no chemicals—only clear water.

Drop us a card if you would like a reprint of this ad with the pretty pin up girl. We'll send you our new catalog, too.



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Bulldozers in the Tillamook Burn

THE series of forest fires that destroyed 330,000 acres of timber in the Tillamook area of Oregon will go down in history as major disasters.

Today the Oregon State Board of Forestry is engaged in a 15-year program of clearing, logging, fire prevention and replanting. And among its most important tools are the Cat Bulldozers that cut fire trails, clear center lines for firebreaks, build access roads and remove snags.

Cable-controlled Caterpillar 'Dozers, matched with D6, D7 and D8 Tractors, are favorites with loggers and foresters for good reasons. They have no equal as earthmovers because the scientifically curved moldboard *rolls* earth instead of pushing it. Box section reinforcement runs the entire length of the blade, giving added strength, and heavy steel stiffeners are welded to the back of the blade. The cutting edge is of high carbon steel for strength and abrasion resistance, and is attached to the blade with plow bolts. A ball-and-socket trunnion gives ideal bearing in all positions of tilt, and a center brace aligns the bulldozer on the tractor, adding support to the middle of the blade.

Heavy-duty sheave supports and radiator guards are included with all Cat cable-controlled units. Precision-made sheaves of heat-treated steel roll smoothly on individually lubricated roller bearings.

These and many other features add up to long life and trouble-free operation. Caterpillar Dealers everywhere are ready to keep equipment on the job with prompt service and genuine Caterpillar parts.

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